VOL. LXXX PART SIX

JOURNAL OF THE ROYAL HORTICULTURAL SOCIETY

JUNE 1955

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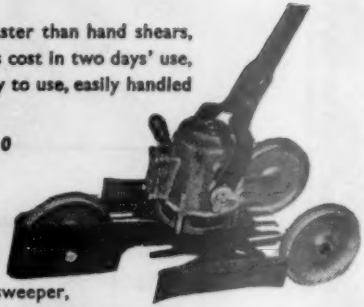

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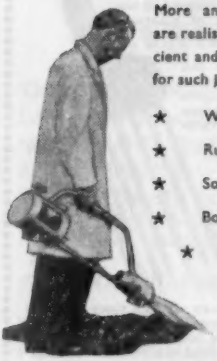

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G. H. Johnstone, O.B.E., V.M.H.

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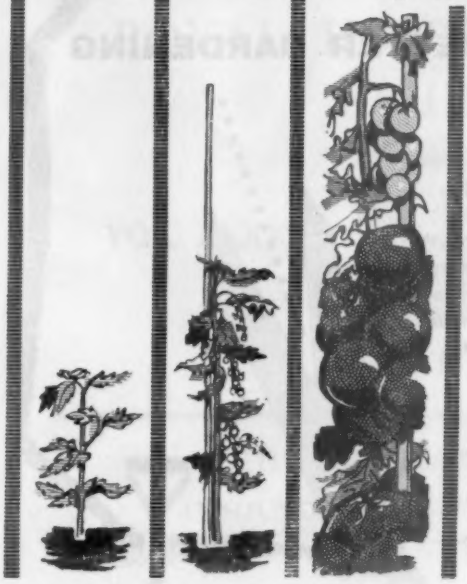

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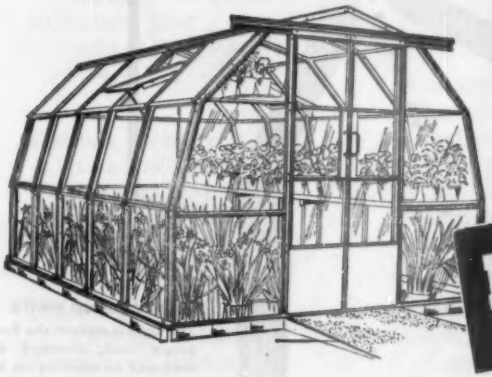

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JOURNAL OF THE ROYAL HORTICULTURAL SOCIETY

VOL. LXXX PART SIX

June 1955

THE SECRETARY'S PAGE

ANNOUNCEMENTS—JUNE AND JULY

Shows

FRIDAY, JUNE 3 12 NOON to 6 P.M. SATURDAY, JUNE 4 10 A.M. to 5 P.M.	British Iris Society's Show.
TUESDAY, JUNE 14 12 NOON to 6 P.M. WEDNESDAY, JUNE 15 10 A.M. to 5 P.M.	Fortnightly Flower Show. Flowering Tree and Shrub Competition. Cactus and Succulent Competition for Amateurs (Sherman Hoyt Trophy). British National Carnation Society's Pink Competition.
TUESDAY, JUNE 28 12 NOON to 6 P.M. WEDNESDAY, JUNE 29 10 A.M. to 5 P.M.	Fortnightly Flower Show. Cactus and Succulent Society's Competition. Geranium Society's Competition. British Delphinium Society's Show.
FRIDAY, JULY 1 11 A.M. to 7 P.M. SATURDAY, JULY 2 10 A.M. to 5 P.M.	National Rose Society's Show.
THURSDAY, JULY 7 12 NOON to 6 P.M.	Floral Arrangement Competition for Amateurs.

Shows—*continued.*

TUESDAY, JULY 12 12.30 P.M. to 6 P.M. WEDNESDAY, JULY 13 10 A.M. to 5 P.M.	Fortnightly Flower Show. Fruit and Vegetable Competition.
TUESDAY, JULY 12 12 NOON to 7 P.M. WEDNESDAY, JULY 13 10 A.M. to 5 P.M.	British National Carnation Society's Show.
TUESDAY, JULY 26 12 NOON to 6 P.M. WEDNESDAY, JULY 27 10 A.M. to 5 P.M.	Fortnightly Flower Show.

Lectures

TUESDAY, JUNE 14, at 3 P.M. "Plant Collecting in the Australian Desert," by MR. F. HILL, B.SC., A.M.I.E.E.

TUESDAY, JUNE 28, at 3 P.M. "Moisture-Loving and Bog Plants," by MRS. FRANCES PERRY, F.L.S.

TUESDAY, JULY 12, at 3 P.M. "Modern Carnations and Pinks," by MR. M. C. ALLWOOD, F.L.S., V.M.H.

TUESDAY, JULY 26, at 3 P.M. "The Influence of Horticulture in Public Parks," by MR. T. E. CLARK, F.INST.P.A.

Demonstrations at Wisley—The following demonstrations will be given at Wisley, that on the second day being in each case a repetition of that given on the first.

Fruit Garden

JUNE 29–30. The Summer Pruning of Fruit Trees. (Commencing at 2 P.M.

Flower Garden

JULY 20–21–22. The Vegetative Propagation of Shrubs and Herbaceous Plants. (Commencing at 2 P.M.)

The National Sweet Pea Society—The Society's 1955 Show will be held in Connaught Park, Dover, on June 29 (12 NOON–9 P.M.) and June 30 (10 A.M.–8 P.M.) (*not in the R.H.S. Hall on July 5 as mentioned in the R.H.S. Diary*). The admission charge will be 2*s.* 6*d.* (children 1*s.* 3*d.*).

Asiatic Magnolias in Cultivation by G. H. JOHNSTONE, O.B.E., V.H.M.

This long-awaited book, which has now been published by the Society, contains a foreword by the President. Copies may be obtained from The Secretary, The Royal Horticultural Society, Vincent Square, London, S.W.1., price £3 3*s.* 0*d.*, packing and postage 3*s.* extra. (U.S.A. $10, post free.)

In addition to separate chapters on each species the book has chapters on the placing of magnolias in the garden, their cultivation, transplanting, pruning and diseases. There are fourteen plates in colour, reproduced with great care and fidelity in 8-colour photo-lithography from paintings by famous botanical artists, and twenty plates in monochrome collotype. The size of the volume is 12¼ inches by 9¼ inches. A prospectus giving some excerpts from the book and a specimen coloured plate and order form may be obtained on application to the Secretary, but the supply of these is limited.

NOTES FROM WISLEY

J. B. Paton

LAST month's brief discussion on shrubs suitable for the lime-free garden is continued here with a consideration of some members of the family Saxifragaceae. Although the family takes its name from the genus *Saxifraga* which provides the rock garden with so many early-flowering plants, it does contain many genera of shrubby plants exceedingly useful to the gardener in providing an abundance of later flowers.

One of the best of these is *Philadelphus*, known as the mock orange or, confusingly, as syringa, a name which should be kept as the botanical one of the lilacs. The genus consists of some forty species of deciduous shrubs native of North America, Asia and southern Europe. Of the American representatives, we note at Wisley, planted to the right of the main entrance against the Laboratory wall, the incompletely hardy *P. coulteri*, which was introduced from Mexico in 1840. In favoured positions it makes a shrub up to 6 feet high with very fragrant solitary flowers 1¼ inch wide, each white petal carrying a purplish-red spot at its base. This species is one of the parents of many of the hybrids with purple-stained petals. *P. pubescens* from south-eastern United States is much more robust; in fact, it is one of the finest of the taller-growing kinds, making a shrub up to 15 feet high. In June are produced pure white flowers which may be as much as 2 inches across and which are carried in racemes of five to nine flowers in the uppermost leaf axils of the lateral twigs. Unfortunately it is but faintly scented, as is the deeply serrated leaved *P. gordonianus* from western North America; the white flowers of this species, appearing in late July, are carried in dense racemes. The shoots are reported to have been used by the native tribes of Indians as arrow shafts. Again almost scentless are the white July flowers of *P. grandiflorus*, which plant, nevertheless, is a popular garden one which was introduced from south-eastern United States in 1811.

Of the Chinese species there are the fragrant *P. delavayi* introduced to the Jardin des Plantes in 1887 by the ABBÉ DELAVAY, and the early-flowering *P. magdalenae* and *P. subcanus*. Both these last two have beautiful pure white petals freely produced in June, but only the

cup-shaped flowers of the latter are fragrant. Flowering usually a month earlier than these are *P. pekinensis* from North China and Korea with faintly fragrant flowers delicately stained with yellow, and the Korean and Manchurian *P. schrenkii* introduced to our gardens in 1874, nine years before *P. pekinensis*.

Of the many handsome hybrids we may note the very narrow-petalled *P.* × *falconeri*, which is probably a hybrid from *P. coronarius* and which, though the individual flowers are attractive and deliciously scented, is not very free-blooming. *P.* × *lemoinei*, also a hybrid from *P. coronarius*, with *P. microphyllus* as the other parent, was raised in 1883 by M. LEMOINE at Nancy. It was the forerunner of many of the present-day garden varieties. It has pure white, very fragrant flowers, freely produced in the leaf axils in June. All the plants mentioned above may be seen in the borders in Seven Acres. But there are many other hybrids in the Apple Walk. There are *P.* 'Virginal' with semi-double fragrant flowers, and its sport *P.* 'Burfordensis' with large white blooms very freely produced, and *P.* 'Girandole' with double white flowers. There is *P.* 'Belle Etoile' a large-flowered single variety with fragrant white flowers blotched at base with purple. And there is a lovely plant of more recent origin, *P.* 'Beauclerk', which was raised by THE HON. LEWIS PALMER in 1942 and is a cross between *P.* 'Sybille' and *P.* 'Burfordensis.' This variety deservedly received an Award of Merit in 1947 and a First Class Certificate in 1951. The wonderful eucryphia-like fragrant white flowers are carried, five to seven of them, in a crowded raceme. Each is well over 2 inches wide with broad ovate or orbicular petals notched at the tips, crimped at the margins and stained with purple at the base.

Closely related to *Philadelphus* is the genus *Deutzia* again very much hybridized and so useful in providing us with summer-flowering shrubs. Both species and hybrids are easily grown hardy deciduous plants which require but little pruning other than removing all the old worn-out or overcrowded growths. Of the species we may note the Chinese *D. compacta* flowering in July, when its whitish flowers appear in closely packed clusters; the June-flowering *D. longifolia* whose purplish-rose buds open to reveal pale pink petals; the abundantly floriferous *D. scabra* with pure white or pink-tinged flowers and its variety *plena* with double flowers 1 inch across and numerous petals narrower than in the type; the not so robust *D. monbeigii*, growing 6 feet high at the outside and carrying corymbs of seven to fifteen small white flowers in May and June; and the Japanese *D. gracilis*, introduced in 1840, with pure white flowers either in erect racemes or in panicles 1½ to 3 inches long. This last species and its varieties are much used for forcing to produce early flowers.

Of the hybrids *D.* × *elegantissima* (*D. purpurascens* × *D. sieboldiana*) received the Award of Garden Merit in 1954 and was fully described in the January JOURNAL (J.R.H.S. **80**, p. 35). *D.* × *rosea* also has *D. purpurascens* as one parent and *D. gracilis* as the other. It makes a compact shrub

with graceful arching branches on which are carried the widely bell-shaped, soft rose blooms. A variety which should be more widely grown is *D.* 'Mont Rose' for it makes a rather upright bush on which its beautiful deep mauve-pink flowers are freely borne.

Escallonia is a genus of some fifty to sixty species which provides some useful evergreen plants for summer flowering. They are natives of S. America and in particular of Chile. *E. macrantha* hails from the Island of Chiloe off the coast of Chile, and in June carries 3–4-inch-long racemes of bright rosy flowers. It is an admirable plant for hedging in mild South Coast towns. *E. leucantha* does not flower until July when pure white blooms appear on terminal racemes 1½ to 2 inches long. This species comes from the mainland of Chile as do *E. revoluta* and *E. illinita* both of which are white-flowered producing their blooms over an extended season from June to September. *E. virgata*, the only cultivated escallonia which is deciduous, is reputedly the hardiest and makes a small shrub 4–6 feet high. Its pure white blossoms are ½ inch across and are produced in June and July in the uppermost leaf axils and at the end of the short twigs, the whole forming a leafy raceme ¾–1½ inch long.

There are many hybrids to be seen at Wisley and we may note in Seven Acres *E.* × *exoniensis* which has an extended flowering season from June to September. It is a hybrid between *E. pterocladon* and *E. rubra* raised in the nursery of Messrs. Veitch at Exeter. The flowers are either white or rose-tinted. *E.* × *langleyensis* (*E. punctata* × *E. virgata*) carries bright rosy carmine blossoms on slender arching branches. With gay pink flowers *E.* × *edinensis* is an almost identical hybrid raised from the same cross at the Edinburgh Botanic Garden. *E.* × *iveyi* is a reputed hybrid between *E.* × *exoniensis* and *E. montevidensis* which occurred at Caerhays and which is a delightful evergreen plant with glittering dark green oval leaves and with white flowers carried in terminal panicles.

More recently a fine group of hybrids has been raised by the Slieve Donard Nurseries in Northern Ireland. The original species from which these hybrids have been bred would appear to be *E. virgata*, *E. macrantha*, *E. pterocladon* and *E. punctata*. Among the resulting hybrids at Wisley are 'Apple Blossom,' with soft pink chalice-shaped flowers, 'Donard Seedling' a vigorous plant with pale pink blossoms, 'Slieve Donard,' a very hardy, large, pink-flowered variety, and the deep carmine 'Glory of Donard.'

Other members of the family Saxifragaceae include the lovely fragrant, white-flowered but none too hardy *Carpenteria californica* to be seen on the west wall of the Laboratory, the greenish-white *Itea ilicifolia* which has not flowered recently and *Schizophragma integrifolium* with flowers carried in flat corymbs. It is the large white sepals of each sterile marginal flower of the corymb which make this plant so striking. These last two are both planted on the east wall of the Laboratory. Unfortunately space does not permit of any mention of the early-flowering *Ribes* or the late-flowering *Hydrangea*.

PLANTS OF INTEREST AT WISLEY DURING JUNE

LABORATORY WALLS

Abelia schumannii
Jasminum × *stephanense*
Senecio laxifolius

GLASSHOUSES

Anigozanthos flavidus
Asclepias curassavica
Cestrum aurantiacum
Fuchsia 'Rose of Castile'
Gloriosa rothschildiana
„ *superba*
Pimelea ferruginea
Sphaeralcea fendleri

WILD GARDEN

Lilies in variety
Magnolias in variety
Meconopsis species
Primulas in variety
Rhododendrons in variety
Stewartia species
Styrax japonica

SEVEN ACRES

Bruckenthalia spiculifolia
Deutzias in variety
Philadelphuses in variety
Spiraeas in variety

ROCK GARDEN AND ALPINE HOUSE

Achillea clypeolata
Allium acuminatum
„ *moly*
Anagallis linifolia var. *collina*
Campanula species
Cistuses in variety
Codonopsis species
Dianthus × *arvernensis*
„ *gratianopolitanus*
Hypericum fragile
Incarvillea delavayi
Iris laevigata
„ *pseudacorus*
„ *versicolor*
Lewisia columbiana
„ *heckneri*
„ *pygmaea*
Lupinus ornatus
Meconopsis quintuplinervia
Mimulus species
Phloxes in variety
Phyteuma comosum
Rhodohypoxis baurii
Rodgersia aesculifolia
Saxifraga cotyledon
Thalictrum kiusianum

WEATHER HILL

Buddleia alternifolia
Cytisus battandieri
Paeonies
Roses

FLORAL TRIAL GROUNDS

Trials of Delphiniums
„ „ Larkspurs
„ „ Perennial Lupins
„ „ Pyrethrums
„ „ Sweet Peas

HERBACEOUS BORDERS

Anchusa azurea 'Pride of Dover'
„ *caespitosa*
Anthemis sancti-johannis
Campanula lactiflora 'Loddon Anna'
Centaurea dealbata
Clematis recta
Lychnis chalcedonica
„ *flos-jovis*
Salvia haematodes
Thalictrum aquilegiifolium
„ *speciosissimum*

BATTLESTON HILL

Hostas in variety
Lilies in variety
Magnolias in variety
Meconopsis species
Olearia × *scilloniensis*
Primulas in variety
Rhododendrons in variety

VEGETABLE TRIAL GROUNDS

Collection of Mints
Trials of Sweet Peas

R.H.S. FLOWER SHOW

March 22 and 23, 1955

FOR the first official days of spring this Show was a very varied one, giving a foretaste of the colour which should come to our gardens during April and early May, together with a pleasant sprinkling of the earlier flowering bulbs.

Immediately below the dais was a very fine gold medal group of tulips, arranged so that the exhibit displayed undulating heights, but in each group showing unusual regularity in height and bloom and a very high standard of cultivation. An unusual feature of the group was the number of lily-flowered forms used. Particularly noticeable was 'Aladdin' with scarlet pointed petals edged with yellow. Among the taller Darwins several of the older varieties were predominant such as 'The Bishop,' deep lilac-purple; 'Marjorie Bowen,' salmon pink, and 'G. W. Leak,' bright crimson-scarlet, and these can still be strongly recommended. Interesting also were the early Darwin tulips, a more recent development and dwarfer in habit such as 'Dutch Gold,' 'Bohemian Girl' and 'Laga,' in which the rosy-crimson petals are edged with white. 'Queen of Bartigons' a very lovely deep shell-pink Darwin, which received an F.C.C. at Chelsea in 1954, is intermediate in height between these groups and was well shown in this group.

The other outstanding exhibit in the hall was a large Gold Medal group of polyanthuses and coloured primroses arranged with considerable skill in large groups against a background of green moss, while mossy paths ran between the groups. Again excellence of cultivation and the considerable size of the blooms drew attention to the advances recently made in the breeding of these plants, particularly in the raising from seed of almost uniform strains such as 'Langdon's Gold' which filled one corner and 'Langdon's Pink.' A few dwarf conifers added height to the group.

Early double tulips were shown in a round bed at one end of a large exhibit of bulbs and noticeable were 'Maréchal Niel,' deep yellow speckled with orange-crimson, and 'Louis Apol,' creamy amber-yellow. Groups of white and purple large hybrid crocuses in grass formed the centre of the exhibit while clumps of larger-flowering tulips were shown at the other end. An exhibit of daffodils from Cornwall provided a welcome foretaste of the many daffodils to come, but the late season had so far prevented more such exhibits. The main display of orchids was in the other hall, but one wall group showed a number of interesting species.

A co-operative exhibit was staged by the North London Group of the Alpine Garden Society and included such interesting bulbous plants in flower as *Fritillaria latifolia*. A small exhibit of snowdrops showed the division of this genus into three series; those with leaves flat against

one another at the base, e.g. *Galanthus nivalis*; those with the margins of the leaves folded back, e.g. *G. plicatus* and *G. byzantinus*; and those with the leaves wrapped round each other at the base, e.g. *G. elwesii* and *G. allenii*.

A co-operative exhibit from members of the Fruit Group showed dishes of late-keeping apples in excellent condition. An interesting exhibit of books relating to orchids taken from the Lindley Library showed something of the wealth of material that is there. A single group of house plants showed the wide range of decorative plants now used for this purpose.

Among the many smaller plants shown were interesting forms of our common celandine such as the copper-coloured *Ranunculus ficaria cupreus* and the large-flowered *Ranunculus ficaria major*, which mingled well with fine specimens of the Moroccan *R. calandrinioides*. Among the shrubs were several groups including camellias in great variety, azaleas, forsythias, and flowering cherries and these added greatly to the colourful effect of the Show.

ANNUAL SHOW OF THE BRITISH ORCHID GROWERS' ASSOCIATION

THE Annual Show of the British Orchid Growers' Association was held in the Old Hall on March 22 and 23. Although the trade exhibits were surprisingly large and of good quality in view of the weather for the last six months, the entries from amateur orchid growers were disappointingly few. The season had been a difficult one, for the plants were slow to develop and to flower after the bad summer last year with the general lack of light, a factor so necessary for good growth. Growers had cut down their estimates for space and then at the last moment with sunny weather found that they had far more blooms than they could show.

When several thousands of orchid plants are gathered together and suitably staged the effect is dazzling and the monetary value of such a collection can be estimated in five figures. The outstanding genus at this time of the year is, of course, *Cymbidium*. The great arching sprays of remarkable grace show to advantage as the flowers face out. Secondly the range of colours is particularly pleasing, for the colours are soft in tone but of great richness. White, pink, red, mauve, purple, bronze and apricot are all represented with wonderful shading and striation. Most effective of all are the remarkable shades of green ranging from the pale yellow-green to deep clear green. These blend all the other colours together and exhibitors took advantage of this to achieve beautiful combinations.

At one end of the hall a Gold Medal group containing about 200 plants showed this genus at its best. Of particular interest were two

plants, both of which received First Class Certificates, *Cymbidium* (Vieux Rose G.) 'Exquisite' and *C.* (Vieux Rose G.) 'Encore' (Fig. 60). These represent an achievement in the breeding of cymbidiums and were noteworthy for their clarity of colour, the fine form, texture and size of the flowers and for their outstanding vigour and strong growth. Another large exhibit of cymbidiums attracted attention.

The British Orchid Growers' Association staged a collective group of miscellaneous plants to be sold to amateur growers only, and a greenhouse filled with a variety of plants whetted the desire of the novice for a similar house. The competitive classes for amateurs were disappointing for in most cases there were only two or three entries and in many cases only one. DR. WILLIAM STIRLING took the first prize in the class for a group of orchids consisting of not less than twenty plants. Included in his group was *Angulocaste* (Apollo G.) 'Wyld Court' with five stalks each bearing a single creamy-yellow flower streaked with minute dots of crimson. This received an Award of Merit. Also included in the group were dendrobiums, cypripediums, coelogynes, lycastes, odontoglossums, etc.

In the class for the best-grown orchid plant first prize went to K. D. MORGENSTERN, ESQ., for a plant of *Phalaenopsis* (Helle G.) 'Finchley,' and second prize to D. M. MARLOW, ESQ., for a plant of *Platyclinis glaumacea*. In Class 7 for a cymbidium plant in bloom, S. H. CHAPPELL, ESQ., took first, and L. W. BRUMMITT, ESQ., was winner in Class 8 for the best cypripedium with *C.* 'Bowden' as well as in Class 12 calling for a group of cypripediums. A. N. ROWLAND, ESQ., won first place in Class 16 for a group of not more than twelve orchid plants, and J. M. FRITH, ESQ., in Class 17 also for a group.

One of the most spectacular groups was one which featured cattleyas, particularly *C.* 'Bob Betts,' a heavily ruffled white with a gold throat. An outstanding clone named 'Excelsior,' which received an Award of Merit showed a distinct advance, for it seemed to accentuate all the good features of *C.* 'Bob Betts,' i.e. broader more heavily textured petals, more prominent ruffling and more pronounced golden shading in the throat. The adjoining stand featured odontiodas and odontoglossums in wonderful shades of crimson and plum and purple, grouped with cypripediums in shades of pale green and yellow. The former were remarkably delicate and lacy in effect, especially when seen in the sunlight.

The dazzling velvety crimson of miltonias formed a central group on the adjoining stand. For richness of colour there are few flowers that can compare. Around them were grouped cypripediums and behind them arching sprays of cymbidiums backed by the deeply cut leaves of *Monstera deliciosa*, a welcome change from palms.

A grower who has always favoured species banked the front of his group with masses of delicate white *Odontoglossum pulchellum* and the exquisite mauve and pink *Oncidium ornithorhynchum*. There was a very wide range of both species and hybrids in this group.

THE SMALLER GARDEN V

FURZEY

F. J. Rose, V.M.H.

FURZEY—in the little New Forest village of Minstead, near Lyndhurst—is well known to many garden lovers. The house is a long, picturesque, thatched building situated on the crest of a slope, and commands a fine view of the New Forest. It was built in 1922 by MR. BERTRAM HOPE (BAY) DALRYMPLE, brother of the present owner, and has the appearance of much greater age. Prior to the First World War, MR. DALRYMPLE was a sheep farmer in Australia but was on holiday in this country when war broke out. He later decided to stay here, sold his interests in Australia, and chose the site at Minstead for his house—a happy inspiration. The garden, which covers about four acres, has been gradually evolved since that time and it is with pleasure the writer has watched its progress through the years.

MR. DALRYMPLE'S brother—MR. HUGH DALRYMPLE—lived about three miles away at "The House in the Wood," Bartley. He was well known as the proprietor of the Bartley Nurseries, also for his introduction of the pink Bartley strain of *Primula pulverulenta*, and many hybrid freesias. The two brothers were keen plantsmen, both rather deaf, small in stature, and so much alike that they were often mistaken for twins. On one occasion in the R.H.S. Old Hall, the writer was talking to MR. BAY DALRYMPLE when a gentleman approached, looked at MR. DALRYMPLE for a few moments with a perplexed look on his face and then asked "Are you you, or are you your brother?" He learned, it was the brother he wished to speak to. There was keen rivalry between the two brothers and much friendly banter. One was always delighted if he could score over the other—particularly in the growth of the shrubs they planted. But there is no doubt that MR. BAY DALRYMPLE received from his brother many suggestions and much help in planting the garden at Furzey.

To the south of the house there are two terraces, each about 16 feet in width. In the first of these are rectangular beds for spring and summer planting. To the east there is a small rose garden, bounded on the eastern side by a hornbeam hedge. Beyond the hedge is a small rock garden. With the usual rock garden plants are some dwarf conifers, including some fine specimens of *Cupressus communis compressa*. But Furzey is noted chiefly for the collection of trees, shrubs and woodland plants which are the main subjects of this article.

MR. BAY DALRYMPLE was a great lover of plants and in common with all lovers of plants, he gave priority to their welfare. The west side of the house is occupied largely by the yellow Banksian rose, and its white form. Here also is a plant of *Mandevilla suaveolens* which reaches to the roof. It appears to be in good health, but has flowered only once

—in 1950. On the same wall is the "Lobster's Claw" plant, *Clianthus puniceus*. In the border at the base of the wall plants, the hardy South African *Nerine bowdeni* produces masses of flowers in September and October. Here also the Brazilian *Erithrina crista-galli* is well established. It has stems 3 feet to 5 feet high with racemes of brick red flowers in late summer. This interesting plant is tender, but it will give of its best here in the south if planted in a sheltered spot with a covering of bracken during the winter. When in flower it never fails to attract attention.

On the south front *Wisteria sinensis* thrives, and *Abutilon milleri* bears its orange-yellow flowers. Here also is seen *Trachelospermum asiaticum*—one of the best wall plants. It forms dense masses of shoots which are covered with small, creamy-white, and very sweetly scented flowers in July–August. *Carpenteria californica* flowers well in this warm southern position and has as its neighbour the scented verbena—*Aloysia* (*Lippia*) *citriodora*. Near by is *Feijoa sellowiana*, a Brazilian plant, which has white flowers, about 2 inches in diameter, with prominent crimson stamens. It flowers in late summer, but unfortunately the flowers are sparsely borne, and hidden by the foliage. It is not an attractive plant.

Chimonanthus praecox, the Winter Sweet, is accommodated on the east side of the house. Extending to the north front are the three forms of *Wisteria floribunda macrobotrys* (*W. multijuga*)—lilac, white, and pink. A mutation has appeared on the white form, the sport being white and deep purple.

From the terraces in front of the house the land slopes down to the east, south, and south-west. A small stream extends the length of the southern boundary. The surface soil at Furzey is of a light sandy texture and acid—typical of the New Forest. It was thought first that few genera beyond the acid-loving heathers would succeed; hence the slope in front of the house was planted mainly with heaths. As many species and varieties as possible were selected—to flower throughout the year. Many of these plants still persist. The dwarf kinds are kept in shape by being trimmed annually with hedging shears. This is done after flowering—the late summer, autumn, and winter varieties towards the end of March. Varieties of *Erica carnea* provide flowers throughout the winter and early spring; among them are the varieties 'Winter Beauty,' 'King George,' 'Springwood' and 'Springwood Pink.' *E. cinerea* 'Golden Hue,' with other varieties of the fine-leaved heath, flower in June and July. In late summer the Cornish heaths are prominent with the well-known varieties *E. vagans* 'Lyonesse,' 'Mrs. Maxwell,' 'Kevernensis,' etc. Drifts may also be seen of *Calluna vulgaris* 'H. E. Beale,' a double pink chance seedling found in the New Forest, and *C. vulgaris* 'J. H. Hamilton,' a brighter pink than 'H. E. Beale' and of more compact habit. These two plants have received the Award of Merit of the R.H.S. and are among the finest of all hardy heaths. The Spanish heath *Erica umbellata* grows well at

Furzey, and the Irish heath *Daboecia cantabrica* is well represented. Taller-growing heaths are planted among the dwarf species. Many of these reach 8 to 10 feet in height and include *Erica arborea* and its variety *alpina*, *E. lusitanica*, *E. australis* and its white form 'Mr. Robert,' *E. mediterranea*, and *E. m.* 'Brightness.'

A number of brooms are also planted among the heaths and one may see the common white *Cytisus albus*, *C. praecox* with its masses of yellow flowers in May, and the hybrids 'Dorothy Walpole,' 'Porlock,' 'Lyndhurst' and 'Minstead.' The two latter are natural hybrids which arose at Furzey and are well worth growing. There are huge plants of *Genista aetnensis* and *G. cinerea* towering above the heaths and in other parts of the garden.

As so often happens with plant enthusiasts the success of the initial planting encouraged MR. DALRYMPLE to extend the garden. In 1927–8 land to the east was brought into cultivation. The site surprisingly proved very favourable for many of the more difficult, rare and tender plants; hence the very fine collection now to be seen at Furzey. Among the first to be planted in the new addition was the brilliant Chilean tree *Embothrium coccineum lanceolatum*. The original tree is now some 25 feet high. Suckers and self-sown seedlings from it have been replanted throughout the garden. Many of these plants are now 15 to 20 feet in height and all flower freely. They form an outstanding feature of the garden in late May and June. Some years ago a shoot was cut from a bushy plant and used as a stake for a nearby small shrub. In due course roots were formed on the stake and three leaders grew from the base. These are now 12 to 15 feet high making a fine plant. There can be few gardens where *E. coccineum* thrives so well.

The valuable, sweet-scented, winter-flowering witch hazels are represented by the two best-known species—*Hamamelis mollis* and *H. japonica arborea*. The Chinese *H. mollis* has the larger flowers produced from December to February. This is acknowledged to be the best of the genus. *H. j. arborea*, a taller species now 10 feet high, at Furzey, continues the flowering period till March. The Japanese *Coryloysis pauciflora*, a near relative of the witch hazels, has formed itself into a hedge. It is 30 feet in length, 5 feet high and nearly 10 feet in width. The short drooping racemes of scented yellow flowers are borne in April and in this favoured garden are seldom injured by frost. A plant of the stronger-growing, taller *C. platypetala* is now nearly 30 feet high. This species has larger and longer racemes of flowers with bright yellow autumn foliage.

Daphnes are among the favourites of all plant lovers and many species may be found at Furzey. Our native *D. mezereum* and *D. m. album* are well represented. This species gives much pleasure in January and February, its sweet-scented flowers being unaffected by the adverse wintry weather. But pride of place must be given to *D. collina*. A very fine specimen of this excellent dwarf species is near 4 feet in diameter. It flowers profusely each year and its rosy-purple

blossoms are a delight to the very many who visit this garden. So also are the specimens of *D. cneorum*. This fastidious plant is quite happy at Furzey. Grand plants overhang stones among the heathers in front of the house. The Chinese *D. retusa* is here one of the easiest of the genus. Good specimens of *D.* × *Burkwoodii* (*cneorum* × *caucasica*) may be seen—a first-class garden plant. The collection of daphnes also includes *D. pontica* which opens its greenish-yellow, fragrant, tubular flowers in April.

In January 1954, Hampshire experienced a severe spell of Arctic weather—the worst for many years. *Leptospermum scoparium* and its variety *nichollsii* were rather badly injured. Fortunately the plants were allowed to remain untouched and have since made a good recovery. *L. lanigerum* from Tasmania with silvery-grey hairy foliage and white flowers was unhurt. This is possibly the hardiest species of the genus. Other plants which surprisingly withstood the hard weather include *Tricuspidaria lanceolata* and *T. dependens*, *Myrtus ugni*, *Berberidopsis corallina*, *Callistemon salignus* and the reputedly tender, autumn-flowering *Escallonia montevidensis*. The specimen of this at Furzey is 20 feet high and growing in the open.

Though the garden at Furzey is very exposed for the large-leaved rhododendrons, a very fine plant of *R. macabeanum* may be seen. The specimen was very small when planted and now measures 8 feet × 10 feet. It flowered first in 1954 and this year again has many flower buds. *R. thomsonii* is 8 feet high and about 14 feet in diameter. Close by is a large plant of *R. cinnabarinum* var. *roylei*. These two species are situated where the early morning and late afternoon sun may shine through their flowers—an ideal position. The bright scarlet *R. neriiflorum* (K.W. 8112) is now 4 feet × 5 feet. *R. schlippenbachii* measures 8 feet × 14 feet. This is a very variable species. In its best forms it is a very fine garden plant. The specimen at Furzey has deep pink flowers. Nearby is *R. yunnanense*, a species well adapted for exposed positions. Also *R. lutescens*, whose bronzy-red spring foliage is perhaps more attractive than its pale yellow flowers. A plant of *R.* 'Tally Ho' (*griersonianum* × *eriogynum*) is growing under a tree of *Malus baccata* and calls for special mention. It is a compact plant, measures 10 feet × 15 feet, and flowers profusely each year. This very popular hybrid rhododendron was awarded an F.C.C. in 1933. Mention must also be made of *R. cinnabarinum blandfordiaeflorum* and the blue *R. augustinii* of which there are very large plants. The tender sweetly scented *R. bullatum* has been growing out-of-doors for years and is now 4 feet high.

R. racemosum is seen at its best in these gardens. It is a dwarf form and deep pink in colour. Several plants were used and these have now grown into a mass. In this way *R. racemosum* is very effective.

The really dwarf species of rhododendrons include the blood-red *R. repens*. This creeping plant is not easy in this country and is rather shy of flowering. At Furzey it grows fairly well. *R. repens* is the parent

of many good garden hybrids. *R. williamsianum*, the attractive and popular shell-pink species, is particularly happy here and flowers freely. *R. calostrotum* with rosy-purple flattish flowers and *R. intricatum*, mauve, one of the best dwarf species, and *R. impeditum*, a stronger-growing plant than *intricatum* and deeper in colour, may all be seen. *Menziesia ciliicalyx*, a very pretty dwarf ericaceous plant from Japan, is planted among the dwarf rhododendrons. Its bright purplish flowers open in May. Another species is *M. purpurea*, a taller-growing plant with larger flowers and good autumn foliage. A plant of *Philesia buxifolia* has so far refused to flower—a tantalizing plant for many.

Several dwarf gaultherias may be seen, which include the Chinese *G. cuneata*, a species with pure white berries often carried through the winter. The dwarf carpeting species from North America, *G. procumbens*, has red berries. Another species produces light blue berries and is probably *G. hookeri*. Ericaceous plants also include a fine specimen of the Japanese *Enkianthus campanulatus*. When seen by the writer on October 4 it had exceptionally good autumn colour, probably due to the open position at Furzey. Plants of *Kalmia latifolia* are 12 feet high. When seen flowering in its best form of deep pink, as at Furzey, this must be classed as one of the best of flowering shrubs for lime-free soils.

Camellias have not been used largely. There is a very fine plant of *C. saluenensis* 8 feet high. Other species include *C. reticulata* and *C. cuspidata*. There are also good plants of *C. japonica* 'White Swan' and 'Lady Clare.'

There are several large groups of hybrid *Pernettya mucronata*—one of the best small shrubs for a garden where ericaceous plants can be grown. They make a good show when in flower and again during autumn and winter with their masses of berries in different shades of colour. A plant of the male form is used in each group to ensure fruiting. Mention must also be made of *Corokea cotoneaster*, a small and interesting New Zealand shrub. The thin shoots which are criss-crossed carry small pretty yellow flowers in May, followed by yellow fruits in the autumn. A plant of *Desfontanea spinosa* was introduced from a neighbouring garden four years ago. It did not appear to suffer from the move and is now doing well.

It has been interesting to watch the progress of the garden at Furzey. Growth of the taller-growing subjects has been rapid and they are now providing shelter from the sun and wind for many of their dwarf neighbours. The genus *Eucryphia* provides several species of great garden value, flowering from July through August. The Chilean *E. glutinosa* (syn. *E. pinnatifolia*) at Furzey is about 15 feet high. It has flowers up to 2 inches in diameter with prominent dark anthers. The foliage is tinted in the autumn. There is also in the garden a double form of this species but it is not so attractive. A fine plant of *E. lucida* is about 14 feet high. Connoisseurs would probably agree that this is the best of the species. The leaves are small, dark green and glossy.

The very pretty white flowers with coloured anthers are fragrant. It flowers freely at Furzey each year. *E.* × *nymansensis*—a natural hybrid of *E. glutinosa* × *E. cordifolia*—is more than 30 feet high. This hybrid varies considerably. Some forms are very free flowering, some sparse. MR. DALRYMPLE was fortunate in planting one of the former. Nearby is *E.* × *intermedia* (*lucida* × *glutinosa*). This is apparently another variable hybrid. The plant at Furzey is more than 10 feet high and has not yet flowered. Some plants raised by the writer more than 20 years ago and now more than 12 feet high have also failed to flower. There are other plants in gardens which flower freely and it is then a very beautiful hybrid.

Two species of the genus *Cornus* noted for their floral display in May and for good autumn colour have made fine specimens. The North American *C. florida* and its variety *C. fl. rubra* are about 10 feet high. *C. kousa* from Japan is larger at 15 feet or more. Two species of *Stewartia* also provide a floral display and autumn colour—*S. pseudo-camellia* and *S. sinensis*. They are now nearly 20 feet high.

The magnolias are represented by *M. stellata*, *M. soulangiana*, *M. kobus* and *M. sieboldii* (*parviflora*) all good specimens. *Hoheria glabrata* is also here with *Abelia grandiflora*, *Rhus cotinus purpureus* and *R. cotinoides*.

Two large specimens of our native cherry, *Prunus avium*, were established on the site of the garden and were carefully preserved. These and two large-flowered Japanese cherries, *P.* 'Ukon' and *P.* 'Kanzan,' provide shade for banks of the hybrid evergreen azaleas—*Rhododendron malvaticum*, mauve, 'Hinodegiri,' bright crimson, and the pink 'Hinomayo,' 'Apple Blossom,' white tinged with pink, and the dwarf red 'Vita Brown.'

MR. BAY DALRYMPLE, who died in 1941, was one of a small group of local lily enthusiasts. It was agreed among members of this small group that if any one should obtain more than three bulbs of any species or variety of lily which the others had not got, he was in honour bound to share. The arrangement worked admirably, and in this way a good representative collection of lilies was formed at Furzey. Most of these were lost during the war, as happened in so many gardens. One plant of *Lilium auratum* still makes a brave effort each year, as also does a plant of *L. canadense*. *L. rubellum* also survives with *L. tigrinum*. Efforts are now being made to revive the collection.

On the left of the short drive leading to the house may be seen a large tree of Cherry 'White Heart.' It bears an excellent crop of fruit each year. As there are no other utility cherries in the area, pollen for fertilization is probably provided by the wild geans already referred to. Close by is an equally fine tree of apple which also crops well. On the right are some magnificent oak trees. The New Forest is famous for its oaks and there are few finer than these. A wide stretch of grass reaches from the oaks to a fine group of Scots pines in the south-western corner of the garden in front of which are huge plants of *Hydrangea mariesii*.

From the grass rise two fine specimens of silver birch whose almost pure white stems are conspicuous the whole year through. Many varieties of daffodils naturalized in the grass produce masses of flower each year. The oaks are surrounded by large quantities of *Cyclamen neapolitanum* which provide much beauty and interest during the autumn months. Lily-of-the-valley and *Anemone nemorosa* 'Alleni' are also naturalized here.

The narrow stream which marks the south boundary with an occasional oak for shade is a great asset to the garden at Furzey. It provides planting sites for many interesting plants. *Iris kaempferi* are massed and provide a gorgeous show when in flower. There are groups also of *I. laevigata* and *I. sibirica*. The Japanese *Kirengeshoma palmata* provides yellow flowers in the autumn. There are groups of *Dianella tasmanica* with its blue flowers followed by blue fruits. The South African Caffir lily is here in its two forms: the scarlet *Schizostylis coccinea* and *S.* 'Mrs. Hegarty'—pink. The bog lily *Lysichitum americanum* produces its huge yellow spathes in April. Astilbes and spiraeas are planted in variety. There are large groups of the ever popular blue poppy, *Meconopsis betonicifolia* (*baileyi*) and the yellow, *M. dhwojii*. The Bartley strain of *Primula pulverulenta* is massed. Other species of *Primula* include *P. bulleyana*, *P. helodoxa*, *P. japonica* in variety, *P. littoniana* and *P. florindae*.

It would not be possible in this article to name all the plants grown at Furzey but sufficient have been mentioned to prove the great horticultural value of the gardens. CAPT. DALRYMPLE is keenly interested and the garden is being well maintained. Furzey is open to the public every day. No charge is made for admission but a box is placed inside the drive gate and visitors are invited to make a small donation. The proceeds thus received enable CAPT. DALRYMPLE each year to contribute generously to the Hampshire Blind, St. Dunstan's, and the National Gardens Scheme.

PLANT COLLECTORS EMPLOYED BY THE ROYAL HORTICULTURAL SOCIETY, 1804–1846

E. H. M. Cox

THROUGHOUT its long history The Royal Horticultural Society has always taken a great interest in the introduction of new plants from overseas. Quite rightly the general trend in horticulture was closely followed. In the 1820's the hothouse and the stove were at their most popular, and possibly at their best, and so FORBES was sent round Africa, and DON made a tour round the South Atlantic, starting in West Africa, then along the east coast of South America and ending in the West Indies. Further east JOHN POTTS went to South China by way of Calcutta, followed closely after by JOHN PARKS. Even DAVID DOUGLAS, whose main collecting ground lay in what are now the states of Oregon

and Washington, collected at every port round South America at which his ship called. It is interesting to note in the correspondence of these various collectors with the secretary of the Horticultural Society how much emphasis is laid at the start on the collection and introduction of living plants of orchids and stove plants in general. The horticultural world was stove-minded. When POTTS and PARKS began to send home florist flowers, chrysanthemums, camellias and azaleas, from China, more were killed by overfeeding and overheating in the stove than by starvation and cold outside.

The realization of the importance of the hardy plant came in slowly, but it was more in evidence in the 1840's, the collecting period of the great ROBERT FORTUNE, while HARTWEG, who was sent to Guatemala and Mexico in 1836, was told in his instructions most clearly to confine himself as much as possible to mountainous districts, where plants would be found that would not necessarily require stove treatment.

There is one great difference between those early collectors and those of the present century in whose collections the Society has had an interest. The early collectors were wholly employed by the Society and were its servants, while in the present century the Society has been in the majority of cases only a member of a syndicate with no actual control over the collectors. This control over the early collectors was absolute. I have read most of the contracts made between the Society and collectors from FORBES to FORTUNE. They are almost all couched in the same terms. Even for those days the Society was not over-generous, and there is only one expression that can be used for the clauses—tough.

As they are extremely interesting, here is that made between the Society and ROBERT FORTUNE on February 23, 1843, written from 21 Regent Street:—

> "You will embark on board the *Emu* in which a berth has been secured for you and where you will mess with the Captain.
>
> "Your salary will be £100 a year, dating from the time of your quitting charge of the Hothouse department until you resume it upon your return from China, clear of all deductions and exclusive of the cost of your outfit or such contingent expenses as may be required in carrying out the objects of the Society.
>
> "The general objects of your mission are, 1st, to collect seeds and plants of an ornamental or useful kind, not already cultivated in Great Britain, and, 2nd, to obtain information upon Chinese gardening and agriculture together with the nature of the climate and its apparent influence on vegetation.
>
> "With reference to these objects you are required to keep a very detailed Journal of all your proceedings, noting down daily the observations you may make or the suggestions to which the objects you may meet with give rise. This will form the materials out of which a narrative of your expedition will afterwards be prepared for the use of the Fellows of the Society.

"You will write home at every opportunity, numbering your letters consecutively, and embodying in them as much as you can the material collected in your Journal. This will enable the Society to judge of the progress you are making in your expedition. All letters must be sent in duplicate, by separate opportunities, so as to guard against the accidents to which a very distant correspondence is liable.

"In sending home plants you will always endeavour to ship them on board vessels belonging to merchants to whom you have introductions. A bill of lading is to be taken and freight will be paid in England upon the arrival of the packages. You will take care to impress upon the minds of the Captains the indispensible necessity of the glazed boxes being kept in the light, on the poop if possible, or on deck, or failing that, in the Main or Mizen-top. It is also of the first importance that your seeds should be kept in some well ventilated place. All packages to be addressed to 'The Secretary,' 21 Regent Street, London, a letter of advice and bill of lading being in all cases sent by the same conveyance.

"But it is desired that although you should take advantage of such opportunities as may from time to time arise for sending home collections, yet that duplicates of the best of them be brought by yourself on your return.

"You will take out with you three cases of live plants for the purpose, 1st, of making presents to those who may be useful to you, and, 2nd, of watching the effect upon the plants of the various circumstances to which they may be exposed during the voyage—the facts relating to this will form part of your report.

"You are also provided with a certain quantity of kitchen garden seeds, the object of giving you which is the same as in the case of the plants, viz., that you may make presents where desirable and that you may ascertain the effects upon the seeds of different modes of packing, the result of which you will also embody in your report.

"The Society cannot foresee what it may be possible for you to accomplish during your residence in China; which according to their present views they wish to limit to one year, and they therefore leave you to act upon your own judgment as to the details connected with entering the country or forming collections. They are, however, advised that Chinese may be engaged at a small daily remuneration who will bring you plants up from the interior, in places where you may find it difficult or dangerous to penetrate.

"The Council do not feel able to determine what ports you should visit, or in what directions you should conduct your researches, the relations between China and England being at present too uncertain. They are, however, disposed to believe that Foo-Chou-Foo, if accessible, holds out the greatest promise of valuable results, because it is the capital of one of the colder

provinces of the Chinese Empire. If Chapoo, the place of resort of the Japanese, should be accessible on your arrival, this would be worth an immediate visit. They also wish that Goolongsoo should be visited before that place is restored to the Chinese Government —but with regard to this and all such questions the Council are willing to trust to your discretion to act as the information you may receive on your arrival in China may lead you to suppose is most advisable.

"If you should find it desirable to make Hong Kong your headquarters, it will be necessary that you should have a piece of ground in which to preserve your plants until opportunities for their shipment arrives. It is hoped that the Lieut. Governor of the Island, MR. JOHNSTONE, will enable you to obtain such a spot without expense, in consideration with your stocking it with such European seeds and plants as you may take out with you.

"It is needless to particularise at much length the plants for which you must enquire. It is, however, desirable to draw your attention to—

"1. The Peaches of Pekin, cultivated in the Emperor's garden and weighing 2 lbs.
2. The plants that yield tea of different qualities.
3. The circumstances under which the Enkianthi grow at Hong Kong, where they are found wild in the mountains.
4. The Double Yellow Roses of which two sorts are said to occur in Chinese gardens exclusive of the Banksian.
5. The Plant which furnishes Rice Paper.
6. The varieties of Nelumbium.
7. Peonies with blue flowers, the existence of which is, however, doubtful.
8. The fingered Citron, called Haong Yune or the Fow-Show, and other curious varieties of the genus Citrus.
9. The Nepenthes, which are different from those in cultivation.
10. Camellias with yellow flowers, if such exist.
11. The true Mandarin Orange called Song-pee-leen.
12. The orange called Cum-quat.
13. The Lilies of Fokien, eaten as Chestnuts when boiled.
14. *Oxalis sensitiva.*
15. *Lycopodium cernuum* called Man-neen-chang.
16. The Azalea from Lo-fou-shan, a mountain in the province of Canton.
17. Cocoons of the Atlas Moth from the same place, called Teen-tsan.
18. The Canes of Commerce.
19. Varieties of Celosia and Amaranthus.
20. Tree and herbaceous Peonies.
21. Varieties of Illicium.
22. The varieties of Bamboo and the uses to which they are applied.

"In all cases you will bear in mind that hardy plants are of the first importance to the Society, and that the value of the plants diminishes as the heat required to cultivate them is increased. Aquatics, Orchidaceae, or plants producing very handsome flowers are the only exceptions to this rule.

"You will take care that the packets of seeds which you send home shall be of sufficient size for general distribution whenever it is possible to procure them.

"You will also collect materials for the analysis of soils by putting up as many varieties of soil as may seem useful, and noting what plants best thrive in them. A quantity not exceeding two lbs. of each soil is sufficient. It is especially desirable to know in what soil the finest specimens of Chinese Camellias, Azaleas, Chrysanthemums, the Enkianthi, etc., are grown. In general the soil in which plants are received from China consists of hard lumps of mud obtained from the bed of the river.

"Although we have statements as to the manner pursued by the Chinese in dwarfing trees, more information is wanted upon that curious subject.

"It is a general practice for the Chinese to put up their seeds mixed with burnt bones. Endeavour to learn whether they do this under the idea that it preserves the vitality of the seeds, or whether they use burnt bones as a manure, sowing them mixed with the seeds; the last is not improbable. It is desirable to gain information as to the way in which they manage their manure; especially if it should appear that their processes are at variance with those adopted in Europe.

"To all collections of living plants and seeds the Society lays exclusive claim. You will also prepare for the Society one set of dried specimens of all plants that you may meet with and have an opportunity of so preserving, but any other collections which you may form will be your private property. It is, however, to be undersood that the Society is not to incur any expense in forming your private collections, and that they are to be altogether subservient to the claims of the Society on your time.

"You are supplied with various tools, which you will leave in China on your return; and with fire-arms, which, before your embarkation for England, you may have an opportunity of selling to advantage, in which case you will do so and credit the Society with the amount received; otherwise you will restore your fire-arms to the Society on your return.

"When in China you will be provided with the money required for your expenses by application to Messrs. Dent & Co., who will cash your Bills drawn on the Treasurer of the Society to the amount of £500.

"All letters, seeds, plants, etc., are to be addressed to 'The Secretary' of the Society, and to no other persons, unless

they relate to private matters with which the Society has no concern.

"With each letter to the Secretary you will send home a cash account of your expenses, and you will preserve vouchers of your expenditure whenever they can be obtained, for the purpose of being audited on your return.

"The Treasurer will advance you a sum of £50 in Carolus dollars, to be accounted for at the general settlement of the account at the end of your mission.

"The letters entrusted to you for various persons should be delivered at the earliest opportunity. A list of them is attached to these instructions."

Then at the end is "Accepted. ROBERT FORTUNE."

I would add that having made their collectors sign on the dotted line, the correspondence between the Society and them always appears to be friendly, with ample praise given where praise is deserved, and a generous interpretation given to financial clauses. The only exception to this friendly atmosphere, I think, is in the case of GEORGE DON who was obviously considered, and quite rightly, to be a very dull dog.

Before I go into the story of the Society's collectors in greater detail, it should be put on record how beholden the Society was, and, indeed, British horticulture, to a number of amateur and professional correspondents throughout the world. It would be a fascinating subject for research, the help that the small, unprofessional collector has given to our garden flora. Here are a few of the names that I came across in the Transactions and in the early numbers of the JOURNAL of the Society; and I only noted very few: THE REV. ROBERT WALSH, chaplain to the British Embassy at Constantinople in 1824, MR. CHARLES FRAZER of New Zealand, SIR STAMFORD RAFFLES, GOSSAIN THAN, SIR RALPH WOODFORD, JOHN MIERS from Chile, JAMES COWAN from Peru, J. G. GRAHAM from the mountains of Mexico, ALEXANDER CRUICKSHANKS in Chile, and missionaries in Labrador and New Zealand. It was one of the last who introduced *Clianthus puniceus*.

JOHN POTTS AND JOHN DAMPER PARKS

JOHN POTTS was actually the first collector in the employment of the Horticultural Society. Both he and PARKS made round trips to China, at that time a journey of about a year. For years I have been surprised at the money wasted by the Society in sending out these two collectors, as at that time it had three exceedingly energetic correspondents, LIVINGSTONE, REEVES and BEALE, who had lived in Macao and Canton for years, were very keen and successful gardeners, and had sufficient money to send home quantities of plants to the Society. Why then waste money in sending out for a very few months two strangers to China, who knew neither the language nor the plants?

As I said, the first of these two collectors was JOHN POTTS, gardener

to the Horticultural Society, who made a round trip to China and Bengal on the Indiaman, *General Kyd*, leaving in 1821 and returning home in August, 1822. LINDLEY spoke highly of his prowess as a collector, but the importance of the plants collected does not seem very striking. Probably the most important portion, forty varieties of chrysanthemums, was lost on the voyage home. He did introduce several varieties of camellia, *Callicarpa rubella* and *C. longifolia*, *Ardisia punctata* and several other greenhouse plants, but nothing that could not have been sent home by REEVES or BEALE. Much the most important thing that POTTS accomplished was to bring back with him a great quantity of seed of *Primula sinensis*. It is probably from this particular introduction that our present strains of this popular flower have sprung.

The second collector was JOHN DAMPER PARKS. He also made the round trip, leaving in 1823 and returning in May, 1824, on the *Lowther Castle*. Although from our point of view PARK's trip was equally lacking in what we should call first-class novelties, yet he was more forthcoming. Both POTTS and PARKS left Journals, but that of POTTS was a dull affair except for a eulogy on the kindness of DR. LIVINGSTONE and MR. BEALE who had sent his Chinese gardener to the hills to collect plants where no Europeans were allowed.

That of PARKS, on the other hand, is much more informative. He speaks very highly of REEVES. "You could not have placed me under a better person than MR. REEVES for he has shown me every attention. Indeed I may say that I have received more favours as a stranger from MR. REEVES than I ever did from any gentleman in my life." PARKS also noticed BEALE's garden and the great number and variety of plants collected therein.

As was usual in those days, PARKS was most interested in the favourite Chinese florist flowers, camellias, chrysanthemums, azaleas. Gardeners at home had not yet had their surfeit of them. So much attention was paid to them in China that he made a special note in his Journal when "MR. REEVES proposed to send a case of wild plants of the hardiest kind."

Apart from thirty varieties of chrysanthemums which arrived home safely, PARKS introduced several more plants of *Camellia reticulata*, a valuable consignment, and four other varieties of camellia, *Coelogyne fimbriata*, and the yellow form of the Banksian rose, another valuable introduction. He also brought home the first aspidistra to be seen in England, *A. punctata*; not the universal window plant, *A. elatior*, which only reached England from Japan in 1835. Most of his Journal is taken up with entries about potting and packing with occasional trips in the immediate environs of the city, and "Sabbath to Church" every seventh day.

PARKS made some interesting notes on the use of Wardian cases. He found that watering at intervals of a week was most satisfactory. In 14 cases he used 98 gallons of water between January 23 and May 4.

ANN V. WEBSTER *del.*

Fig. 50. Cotoneaster hupehensis

A specimen plate from the Botanical Magazine, Volume 170, Part 3

Photo, Amateur Gardening

THE SMALLER GARDEN—FURZEY

FIG. 51—Part of the garden with specimen birch trees underplanted with flowering shrubs and spring flowers

FIG. 52—Part of the Heather Garden

Photo, Amateur Gardening

Photos, Amateur Gardening

FIG. 53—Daffodils at Furzey

FIG. 54—Bedding round the house at Furzey

Photo, Amateur Gardening

FIG. 55—Furzey, part of the garden with a small stream and water plants

PLANT COLLECTORS EMPLOYED BY THE ROYAL HORTICULTURAL SOCIETY, 1804–1846

FIG. 56—DAVID DOUGLAS (See p. 272)

Photo, Amateur Gardening

FIG. 57—A fine tree of *Halesia monticola* in the garden of THE HON. LADY HENN-COLLINS at Briff Farm, Bucklebury Common, Berkshire (See p. 285)

FIG. 58—Lobelia Hybrid. *Lobelia cardinalis* × *L. syphilitica*, an F2 plant with good flowering habit (See p. 282)

Photo, Frank Eyre

Photo, Amateur Gardening

FIG. 59—*Halesia monticola* (See p. 285)

FIG. 60 — Cymbidium (Vieux Rose G.) 'Encore' **F.C.C.** March 22, 1955, shown by H. W. B. SCHRODER, ESQ. (See p. 257)

Photo, J. E. Downward

GEORGE DON

GEORGE DON was foreman at the Society's garden at Chelsea when he was given the opportunity of making a circuit of the South Atlantic in a survey ship, H.M.S. *Iphigenia*. He was at Sierra Leone in February 1822 and at St. Thomas in May 1822, crossed to Brazil and visited islands in the West Indies, among them the Grand Cayman. His Journal is very dull, and I cannot find that he introduced any plants of importance except, possibly, Havana tobacco. He did send home a lengthy and knowledgeable report on tropical fruits, but as far as I can gather he raised little or no enthusiasm among our gardeners.

JOHN FORBES

Very different was JOHN FORBES, who unfortunately died shortly after reaching the Zambezi, the main centre of his exploration. He must have been a very bright and much loved young man, with an intense interest in anything to do with Natural History. As so often happened, his ship called at Rio before crossing to South Africa. There is a Note of Council that after a few days there he sent "per packet *Lusitania* 5 packets of minerals, skins of 25 birds, 2 packets of lichens, four drawings of plants [including a tillandsia and *Heliconia humilis*], 3 parcels of lichens" and a will leaving everything to his father and mother.

His notes are full of human touches. He was much bothered by cockroaches eating his books and found the cure "to keep cockroaches from book-bindings on board ship 1 oz crude sal ammoniac in a quart of water and 2 ozs corrosive sublimate."

When he arrived at Table Mountain on July 12, 1822, he found it covered with snow, but also notes the beauty of *Leucodendron argenteum*. His ship called at Simon's Bay, Gordon's Bay and Delagoa Bay, and he spent Christmas in Madagascar. When on shore he was a whirlwind of energy, but shipboard bored him. "There are many parts of my journal that may appear unnecessary and unconnected with the objects of my mission but my materials have been so scanty that I was obliged to introduce matter that would have been as well omitted perhaps. I hope you will excuse any defects of this kind."

SABINE, the secretary of the Society, was obviously pleased. He wrote, "The whole of your performance is very satisfactory to me, and I have great pleasure in repeating my expressions of confidence in your exertions."

North of Delagoa Bay they began to run into trouble. Fever had carried off thirty men by October 31, and his boat was damaged by a hippopotamus. Even more alarming, while it was being repaired they were attacked by men with "Hassegay Spears" and shields, but only one man was wounded. Then word came that FORBES had died while on his way up the Zambezi to winter quarters which were to have been about 150 miles up river. His obituary notice read, "To the memory of MR. JOHN FORBES, A.L.S., a Botanical Collector in the service of the

Horticultural Society of London who died at Senua on the Zambazee River in Eastern Africa in the Month of August 1823 in the 23rd year of his life."

A German botanist, a MR. HILSENBERG, was found in Mauritius who was supposed to have carried on the expedition, but it seems to have closed down completely. FORBES was obviously a very fine young man. That botanists thought well of him is proved by plants called after him, among them *Amaryllis forbesii*, *Cattleya forbesii* and *Oncidium forbesii*.

DAVID DOUGLAS

DAVID DOUGLAS was born at Scone near Perth in 1799. From his earliest days he was obviously keen on the countryside and all country pursuits. At eleven years of age he began his apprenticeship at Scone Palace, a long seven years, but he must have pleased his superiors, as in 1818 he went to the famous garden of Valleyfield at Culross on the Forth where SIR ROBERT PRESTON had a great collection of plants. Again he made good and in 1819 he was made foreman. The next year he went to the Botanic Garden in Glasgow where he came under the influence of the great SIR W. J. HOOKER, an influence that lasted throughout his life (Fig. 56).

In 1823 The Horticultural Society decided to send a collector to the north-west of the American continent. On HOOKER'S recommendation to SABINE, DOUGLAS was offered and accepted the post. As a kind of trial trip he was at once sent to the eastern United States for a few months to collect as many new varieties of fruit as possible. This short trip was carried out with great tact and success.

In July 1824 he sailed under the auspices of the Hudson Bay Company to the mouth of the Columbia River by way of Madeira, Rio, Juan Fernandez and the Galapagos Islands. His first sight of what was later to become the boundary between Oregon and Washington was not exactly a pleasant experience, as the ship had to lie off the mouth of the Columbia River for six long weeks owing to severe gales. But as soon as he could land in that not very inviting estuary, he began collecting. It is romantic to think that two of our most useful shrubs, *Gaultheria shallon* and *Ribes sanguineum*, were collected by him within a few hours of landing. Indeed, shallon was the first plant he found as he jumped off the rowing boat that took him ashore. Within a few days he had also collected *Berberis aquifolium*, which had been introduced previously, *B. nervosa*, *Arbutus menziesii* and the squamash, *Camassia esculenta*.

The Indians of the north-west were not an agricultural people and lived for the most part on such game as they could slaughter, on dried salmon and on wild roots. DOUGLAS always travelled light and tried to live on the country; the consequence was that he was usually on very short commons and often on the brink of starvation. "The following day found me so broken with fatigue and starvation, and my knees so much worse, that I could not stir out. We fared most scantily on the

roots of *Sagittaria sagittifolia* and *Lupinus littoralis* till, crawling out a few steps with my gun I providentially saw some wild birds, and killed five ducks with one shot. To save time in plucking the fowl, I singed off the feathers, and with a basin of tea, made a good supper on one of them."

His main headquarters were at Fort Vancouver on the Columbia River, nothing to do with the City of Vancouver in British Columbia, and from there he made trips up and down the main river and its tributaries. As a traveller he was remarkable. He thought nothing of going full out by river, horseback and on foot, 800 miles down the Columbia River valley in twelve days, so that his specimens and seeds could catch a boat leaving for England. The distances were so great and communications so bad that letters were few and far between. "Those persons who have never been, like me, in such a remote corner of the globe, may perhaps think I should be ashamed to own my own weakness on the present occasion [of receiving letters]; but long as I had been kept in ignorance of everything respecting my dearest friends, my anxiety was not allayed by *one* perusal of my letters, and no less than four times during the night did I rise from my mat to read and re-read them, till, ere morning dawned, I had them, I am sure, all by heart."

During 1825 he travelled 2,105 miles, in 1826 3,932 miles and in 1827 995 miles up the Columbia River from its mouth to its source. In one of the current publications of the Canadian Pacific Railway the editors state that no survey of this tremendous river valley has equalled that of DAVID DOUGLAS, made 130 years ago.

During 1826 he went south towards northern California. He had to live on deer meat alone, as no luggage of any kind was possible in totally unexplored country. Rain fell in torrents; only one meal a day; no cover; no stores; no luggage. He thought nothing of walking "forty-three miles through a most wretched country without having anything to eat."

Then in 1827 he decided it was time to go home, so he walked most of the way from Fort Vancouver to Hudson's Bay, found a ship there on the point of sailing on September 15 and arrived at Portsmouth on October 11.

DOUGLAS was a curious warped individual, possessed of what commonly goes by the name of an inferiority complex. The only person who appeared to have any real influence over him was HOOKER, and his correspondence shows that DOUGLAS was often troublesome and sometimes childish. He was undoubtedly at his best when he had to fight against nature in the raw. By the middle of 1829 he was only too willing to be persuaded by the president and council of the Society to go out again to the Pacific north-west. He sailed in October, but conditions in the Columbia valley had deteriorated to such an extent owing to local tribal warfare that exploration work was impossible, so he transferred to San Francisco where he botanized in the Monterey

Peninsula. He described *Sequoia sempervirens*: "The great beauty of Californian vegetation is a species of taxodium which gives the mountains a most peculiar, I was almost going to say awful, appearance, something which plainly tells that we are not in Europe." He did not, of course, see *Sequoia wellingtonia*. In 1832 he sailed to the Sandwich Islands. About this time he heard of the resignation of SABINE from the secretaryship of the Society. SABINE had always been most kind and encouraging to DOUGLAS who felt that he could not carry on with the Society without SABINE and in turn resigned. In 1833 he was back on the Columbia River, but little is known of his travels during the last two years of his life as his Journal was lost in a wrecked boat on the Fraser River.

What is known is that he was much attracted by the Sandwich Islands and decided to spend some time in exploring them thoroughly. On July 15, 1834, on the main island he fell into a pit made to catch wild cattle and was gored to death by a bull; a sad end to a brilliant traveller.

Long lists of plant introductions are often tiresome, but those of DOUGLAS contain so many plants that are standard today that I must give a selection:

Abies grandis, *Berberis aquifolium*, *Clarkia elegans*, *Collinsia bicolor*, *Crataegus douglasii*, *Douglasia nivalis*, *Gaultheria shallon*, *Mimulus moschatus*, *Nemophila insignis*, various penstemons, *Picea sitchensis*, *Pinus insignis*, *Pinus ponderosa*, *Pseudotsuga douglasii* (*taxifolia*), *Ribes sanguineum*.

And yet I have an odd feeling that the peculiar fact about DAVID DOUGLAS is not that he collected and introduced so many well-known plants, but that he did not collect and introduce many that were just as plentiful and are just as beautiful. He did not send home seed of *Cornus nuttallii*; he did not introduce a further supply of *Arbutus menziesii*; he neither mentioned in his Journal nor collected any of the lovely western American lilies, *L. pardalinum*, *L. columbianum*, *L. rubescens*, and so on; above all he neglected *Rhododendron californicum* and the spectacular azalea, *R. occidentale*; he mentions thuya frequently as a timber that was used for repairing canoes, but he never sent home seed of the giant *Thuya plicata*, nor did he collect *Libocedrus decurrens*, although both those trees were plentiful throughout his area. Throughout his Journal you notice his impatience at being held in one place through illness or bad weather, and his intense desire to be on the road again.

DAVID DOUGLAS must be considered as one of the world's greatest travellers; but I have reluctantly come to the conclusion that he was not one of the world's greatest collectors. He missed too many opportunities in his desire to get on at the greatest possible speed. Today he would probably have been the world's best racing motorist.

JAMES MACRAE

During the same period another gardener and Scotsman, JAMES MACRAE, collected for the Society. He had been brought up in tropical gardens. In 1823 he was in the employment of the Botanical Garden at St. Vincent in the West Indies, and in 1830 he died in Ceylon. He collected in South America for the Society from September 1824 to March 1826. H.M.S. *Blonde* on which he travelled made the usual circuit, Rio and St. Catherines in Brazil, the coast of Chile and the Sandwich Islands, which seemed to have been popular at that period (MACRAE took out boxes of plants to give to the Hawaians); then on the way home he landed on the Galapagos Islands, the coast of Peru, and Santiago in Chile.

MENZIES a few years earlier was the first to send home seed of the monkey puzzle, *Araucaria araucana*, but MACRAE sent home a much larger quantity, and was several years earlier than LOBB who is credited with sending home the main introduction in 1844. In Volume VI of the *Transactions of the Horticultural Society* it states definitely that "MR. MACRAE succeeded in procuring a supply of fresh nuts of the highly prized Araucaria pine which arrived in England in a living state, and from which a considerable distribution has already been made by the Society."

In MACRAE's Journal he complained that he could not go where it was growing wild as it was "in the Araucanian territory which was inhabited by several tribes of Indians who were often at war with each other . . . and who were only waiting for a favourable opportunity to disturb the Chileans." In Concepcion he found it growing in gardens, "a bearing tree in a garden near the Nunery, the trunk was for some height disfigured with holes made by the inhabitants for to procure the resinous juice which they use frequently for sores and other inward complaints."

Although he mentions alstroemerias and amaryllis, his general collections were mainly for the stove.

THEODOR HARTWEG

The last of the Society's collectors in America was THEODOR HARTWEG who was a clerk in the Society's garden at Chiswick when he was appointed in 1836 to collect in Mexico, particularly in the mountainous regions. Travel was extremely difficult owing to the unsettled state of the country, and for the first few months he had to confine his collecting to the coastal areas near Vera Cruz.

HARTWEG must have been a very hard worker. By February 1837 he was able to send home plants of sixty-five species of orchid. A little later he reached Mexico City and moved into the mountains where he complained that foreigners were lassooed and everything was eaten by goats. But from Aguas Calientes he again despatched cases of cacti and epiphytic orchids and sufficient seed to distribute 2,500 packets to fellows. His travels took him to the north-west of Mexico, but

everywhere he complained about the barren hills and the absence of useful plants, while the country was so insecure that bands of robbers up to 300 strong were as common as frogs in a pond. His difficulties became so obvious that in December 1838 the Council decided to tell him to go to Guatemala.

He wrote of *Achimenes*, and evergreen chestnuts and *Dahlia repens* (?) "growing only a foot high and it could perhaps be employed with effect to produce dwarf varieties." But his main collections and introductions were the Mexican pines, *Pinus ayacuhuite*, *P. patula*, *P. macrophylla*, *P. hartwegii*, and so on. His final sending of seed from Mexico was mostly of pines, and a further 4,300 packets were sent out to fellows.

In Guatemala his collections consisted almost entirely of orchids, but he makes a remarkable statement about a *Taxodium distichum*, growing in dry burning soil seven leagues south-east of Oaxaca which at 6 feet from the ground was 38 feet in circumference.

From Guatemala HARTWEG went to equatorial Andes by way of Callao in Peru, the foothills of the volcano of Chimborazo; then to Quito and Bogota. He collected Andean gentians and saxifrages, but I gather few seeds from South America reached home. He was absent from England six years and ten months.

HARTWEG'S Journal is very difficult to read, and he was no author. On the other hand he strikes me as being one of the most painstaking of all the collectors sent out by the Society, and his journeys took him through more difficult and dangerous country than any of the others, with the exception of DAVID DOUGLAS. I think his work is worthy of far more detailed examination.

ROBERT FORTUNE

Finally we come to the great ROBERT FORTUNE. The Treaty of Nanking in 1842 opened four additional Treaty ports in China as well as ceding us Hong Kong. This allowed a much freer approach, although the interior of the country was still forbidden ground.

JOHN REEVES was living in retirement in England by this time and was a leading figure in the Society. He at once realized that the great chance had come.

The treaty was only signed by SIR HENRY POTTINGER on August 26, yet on December 26, we find Lord Canning writing to the energetic LINDLEY:

"I am directed by the EARL OF ABERDEEN to acknowledge the receipt of your letter of the 14th instant; and I am to acquaint you in reply, that His Lordship would suggest that the Horticultural Society should defer sending any person to China for the purpose alluded to in your letter, until the officers to be appointed by Her Majesty, to reside in the Chinese Ports, shall have entered upon the duties of their offices, and be in a situation to protect the person who may be employed by the Society."

This letter had little effect. REEVES now came definitely to the fore as the presiding genius of what was called the Chinese Committee. This Committee was active in preparing the way for a collector. Probably REEVES had a shrewd suspicion that he and his friends in Hong Kong and Canton knew as much about conditions and difficulties in China as any newly appointed consuls.

On December 28 the Chinese Committee held a meeting at which it was resolved that a number of instruments should be furnished to their collector, beginning with thermometers and hygrometers, continuing with a spade and trowels and finishing with a life preserver.

The collector chosen was ROBERT FORTUNE. He was born at Kelloe in Berwickshire probably on September 16, 1812. After being educated at the parish school at Edrom he served his apprenticeship in the gardens of MR. BUCHAN at Kelloe. He was then employed for some years at Moredun, near Edinburgh, before entering in 1839 the Royal Botanic Garden at Edinburgh under the famous WILLIAM MCNAB. FORTUNE must have been both a hard worker and a skilled gardener. After only two and a half years MCNAB, never an easy man to please, recommended him for the post of superintendent of the hothouse department of the Horticultural Society's gardens at Chiswick. A few months later he applied for the post and was appointed as the Society's collector in China. His travels in the Far East extended over nineteen years.

Shortly after his appointment the Chinese Committee had refused his request for fire-arms. He returned to the attack in a letter to LINDLEY dated January 1, 1843: "I am much disappointed at the resolution of the Committee with regard to fire-arms, and I still hope that you will endeavour to make them alter their minds upon this subject. I think that MR. REEVES is perfectly right in the majority of cases—that a stick is the best defence—but we must not forget that China has been the seat of war for some time past, and that many of the inhabitants will bear the English no good-will. Besides, I may have an opportunity, some time, to get a little into the country, and a stick will scarcely frighten an armed Chinaman. You may rest assured that I should be extremely cautious in their use, and if I found that they were not required they should be allowed to remain at home."

At the next meeting of the Committee it was resolved that "FORTUNE be supplied with fowling piece and pistols, and a Chinese Vocabulary." Perhaps the last word was with the Committee.

His instructions from the Horticu'tural Society are given in full on pp. 265–9.

ROBERT FORTUNE was certainly one of the greatest of our plant collectors in the Far East. He was obviously level-headed and calm under any storm or stress. While returning to Chusan in a junk at the end of his first expedition, they were attacked on several occasions by pirates. FORTUNE at the time had a severe bout of fever, but with no other Europeans to help him he dragged himself on deck, bade his own

crew take cover behind the bulwarks until the pirates were close enough, then stood up and raked the deck of the pirate junk with a big double-barrelled fowling-piece. FORTUNE drove off pirates on three separate occasions without turning a hair.

It was this complete absence of fuss, and a brain that was always cool and collected, that got him out of a number of tight corners, for some of the areas which he visited were distinctly anti-foreign. He obviously had not one ounce of humour in his make-up; but possibly he was none the worse for that. As a makeweight he had no false pride, and his books are written with a directness and absence of frills that make them excellent reading today.

It is only natural that on this first expedition to China FORTUNE was unable to journey far afield through force of circumstances. Peace had only lately been declared, and conditions near the coast were still unsettled. No European knew the interior of the country well enough to advise where plants might best be collected. Even REEVES could have received little information from his Chinese friends, as no Chinaman of any wealth or education would dream of travelling far from his own province unless absolutely forced to.

The title of FORTUNE's first book incorporating *Northern Provinces* is, of course, misleading. The farthest north that he reached was Soochow, and that only once. His main headquarters in the so-called North was Shanghai.

After leaving Hong Kong in August, 1843, he sailed for Amoy and from there to Chusan. During this journey he was severely buffeted on the junks in which he travelled, and was twice nearly wrecked. He returned to Chusan on several occasions; thus he was able to explore the island thoroughly. From there he visited Ningpo on the mainland opposite, and the tea districts in the nearby hills. He was one of the first Europeans allowed to make a critical examination of tea growing and manufacture, and to describe its cultivation in detail.

FORTUNE was very successful on this first trip, although he never went more than 30 miles away from a treaty port. He had a real flair for collecting, and, above all, had perfect judgment about the necessary requirements for a good garden plant. This is noticeable throughout all his many years in the East. It may be said that, when no one had been there previously to skim the cream off the milk, the separations of one from the other was a simple matter. But FORTUNE introduced very few mediocre plants; his average was distinctly high.

So enthusiastic did he become over the plants to be seen in private and nursery gardens at Shanghai that the native nursery gardeners took fright. They became terrified that FORTUNE would seize their entire collections of plants without paying for them. So much so that they placed small boys on watch to warn them whenever FORTUNE appeared. Then the nursery gates were at once shut and padlocked: the nurseries were in a state of siege. After six or seven attempts on his own to come in contact with the owners and start bargaining, he became tired of this

treatment. He asked the help of a Chinese officer to explain that he would gladly pay for everything he took. After unlimited tact and patience FORTUNE won their confidence. In the end the nurserymen offered him every plant in Shanghai; but only after the waste of many weeks.

It is quite impossible to mention more than a few of his introductions. On this first expedition he was particularly lucky; he was the first on the scene. Although ignorant of the language, he was not overcome with shyness at the lack of a common tongue, and was very successful in inspiring the Chinese with confidence in his honesty. He was there alone; with no opposition he was able to choose what he wanted with due discrimination and without haste. He was not, however, able to collect all the plants mentioned in his instructions.

One of the first of his finds to reach England was *Anemone japonica* (now to be called *A. elegans*) which he found blooming in November in Chinese graveyards, " a most appropriate ornament for the last resting places of the dead." He at once despatched roots and by 1844 it was in flower at Chiswick.

Almost his favourite introduction was *Diervilla florida*, usually known by its other name of *Weigela rosea*. He came across this constantly in Chinese gardens, although it is a native of Japan and not found wild in China. "Another plant, certainly one of the most beautiful shrubs in Northern China, the *Weigela rosea*, was first discovered in the garden of a Chinese mandarin near the city of Tinghae on this island [Chusan]. This spring it was loaded with its noble rose-coloured flowers, and was the admiration of all who saw it, both English and Chinese."

Two early-flowering climbers both originate from his first expedition, *Lonicera fragrantissima*, and the universal favourite *Jasminum nudiflorum*. The latter FORTUNE introduced, although it had been found first by BUNGE at Peking. Other well-known plants are *Dicentra spectabilis*, *Platycodon grandiflorum*, *Forsythia viridissima*, *Chamaerops fortunei*, *Ilex cornuta* and *Cryptomeria japonica*.

As was pointed out before, the tree paeony was not cultivated near Canton, although it was brought down every year from the north in vast quantities and forced into flower. Near Shanghai FORTUNE found himself in the centre of its area of cultivation and introduced on various occasions many varieties which were not seen in Canton. In 1844 and 1845 he sent home twelve or thirteen new varieties, some of great beauty. Another florist flower that he came across near Shanghai and Soochow was *Rhododendron* (*Azalea*) *obtusum* in several of its innumerable forms. On the other hand by this time China could teach Europe nothing about the chrysanthemum, although FORTUNE did send home two small varieties from Chusan that became the parents of our Pompoms.

On his return to England in 1846 FORTUNE was appointed Curator of the Chelsea Physic Garden, but only held this post until 1848, when he was commissioned by the East India Company to return to China, this time on their behalf. The object of this trip was no less than the

introduction of China Tea into India where the Company hoped to start its cultivation in Sikkim and Assam. With the consumption constantly increasing in the British Isles they must have realized for many years the possibility of transferring its cultivation to some area less liable to the extortions of the Chinese. What had been lacking was the means.

[The Editor acknowledges with thanks the permission given by MR. W. A. COLLINS to quote extensively from MR. E. H. M. COX's book *Plant Hunting in China*, published by Messrs. William Collins & Sons.]

Curtis's Botanical Magazine

TAB. 245

COTONEASTER HUPEHENSIS

Rosaceae

The large globose fruits, more like those of a Siberian crab-apple than a cotoneaster, are the outstanding feature of this attractive species and, in association with the small hairy leaves, the hairy inflorescences, and the large flowers with wide-spread petals and a gynoecium of two carpels, set it apart from all its congeners. It is a free-flowering, free-fruiting shrub of about six feet with long slender graceful branches which are densely hairy at first. The fruits contain two pyrenes which are sometimes so closely pressed together as to appear to form a single structure.

Cotoneaster hupehensis was described in 1912 by A. Rehder and E. H. Wilson from material collected by the latter in western Hupeh, the type being his number 334 gathered at Hsing-shan Hsien in 1907 when he was travelling for the Arnold Arboretum. He had, however, collected the species previously, in 1901, at Paokang Hsein, when he was working for Messrs. Veitch (Veitch Exp. no. 2030a). With these two gatherings Rehder & Wilson associated material collected in 1888 by A. Henry (no. 5525), and that obtained by Wilson (Veitch no. 3509) in 1903. The Henry specimen came from south Wu Shan, eastern Szechuan, and matches Wilson's Veitch no. 2030 from Fang in western Hupeh; they differ from *C. hupehensis* by the smaller leaves, and would seem better associated with *C. racemiflora*. Wilson's 3509 from western Szechuan is very similar to W. P. Fang's 3690 from Tachienlu, Sikang, and, like it,

differs from *C. hupehensis* by the smaller ellipsoid fruits which appear to have been deep purplish or black. While the removal of these collections from *C. hupehensis* eliminates the extension of its area of distribution westward from Hupeh, other records extend the area northwards and eastwards from western Hupeh to Honan (Lushih Hsien some 200 miles north of Hsing-shan Hsien, and Kikung about 200 miles east-north-east of that town) and to the eastern border of Anhwei (Chuchow) and adjacent western Kiangsu (Nanking), upwards of 380 miles still farther east.

C. hupehensis is most closely related to *C. multiflora* Bunge, which is easily distinguished by its glabrous leaves and inflorescences as well as by its smaller fruits, and to *C. racemiflora* (Desf.) K. Koch, which has generally smaller more obtuse or rounded leaves, smaller flowers and smaller fruits. *C. racemiflora* var. *Veitchii* Rehd. & Wils., which has fruits longer than usual for the species and larger more acute leaves, seems better placed under *C. hupehensis*. *C. racemiflora*, which in one form or another has an extremely wide distribution from the eastern Mediterranean through Asia Minor to the Himalaya and China, is one of the two species known in gardens as *C. nummularia*. The other is *C. Lindleyi* Steud., a native of the Himalaya and easily distinguished from *C. hupehensis* by its very broad oval, almost orbicular leaves rounded at the apex, and its smaller purplish-black fruits.

CULTIVATION. Our species was introduced into cultivation by E. H. Wilson, but it does not seem to be as widely known as might be expected of such a striking member of the genus. The material figured here was very kindly supplied by Lady Violet Astor from a plant at Hever Castle, Edenbridge, Kent. Lady Violet tells us that the plant is growing in a rather dry position against a wall and though it flowers and fruits abundantly, she thinks it might do better in a more open situation. *C. hupehensis* is quite hardy at Kew and requires the conditions usually provided for this type of shrub.

[Excerpt from Part 3, Vol. 170 of *Curtis's Botanical Magazine* with specimen plate. The full description and text figures given in the Magazine have been omitted here. Subscriptions to the Magazine (price £2 per annum, post free) should be sent to The Secretary, The Royal Horticultural Society, Vincent Square, London, S.W.1.]

NOTES FROM FELLOWS

Lobelia cardinalis × *L. syphilitica hybrids*

BEFORE 1900, hybrids were raised between these species, and WILLIAM ROBINSON, in *The English Flower Garden*, mentions *Lobelia* × *gerardi*, a hybrid of the above-mentioned species, of vigorous growth, and a very continuous flowering plant with green leaves.

In 1938 trials of herbaceous perennial lobelias were held at Wisley, and it is interesting to note the various coloured varieties that could be obtained at that time: rose-pink, rose, carmine shades, lavender-violet, scarlet shades, and purples. During the 1939–45 war, unfortunately, a large number of these most useful garden varieties appear to have been lost, and it was with a view to attempting to reproduce some of the above coloured forms that breeding experiments were started a few years ago.

A first step was to produce a plant rather like the original *L. gerardi*, with all the "hybrid vigour" of a first cross between species. These hybrids proved to be hardy in the open, the leaves are pale green, and they grow 4 to 6 feet high; the colour of the flowers is pale purple. The period of flowering is greatly extended by the branching habit of growth, and the fact that they are almost sterile.

The next step was to attempt to obtain an F.2 generation, and this proved rather difficult to do in any quantity, as the F.1 plants appeared to produce little or no pollen. However, by pollinating numerous flowers with pollen from *L. cardinalis*, a quantity of fertile seeds was obtained.

As was to be expected this generation showed a great diversity of form, producing plants with green leaves, intermediate, and purple leaves, and flowers of *cardinalis* type (none were quite so large) and others similar to *L. syphilitica* (Fig. 58). In fact several plants appeared identical to typical *L. syphilitica*, but no plant appeared identical to *L. cardinalis*. A few dwarf forms, some very like *L. syphilitica nana* occurred, but in each case with violet or blue flowers. These dwarfs are free-flowering, and strong-growing, quickly forming a plant 9 inches high and 1 foot across.

Among the colours found in these seedlings were the following: Magenta (H.C.C. between 27 and 27/1), Turkey Red (H.C.C. 721), Dianthus Purple (H.C.C. 730/1), Ruby Red (H.C.C. 827/1), Garnet Lake (H.C.C. 828/3), Rose Madder (H.C.C. 23), Neyron Rose (H.C.C. 623), Sea Lavender Violet (H.C.C. 637), Flax Blue (H.C.C. 624/3) as well as a number of other coloured forms.

It was pleasing to find that the hard frost early in 1954 did not damage these plants growing outside in spite of the fact that they had already started to make new growth. Some of the plants had retained the character of *L. syphilitica* of rooting freely up the stem, in fact pieces of stem, pulled off from these plants in July or August, and put in jars of water, quickly form a mass of roots.

Concerning the question of hardiness of *L. cardinalis*, it would appear

that many plants are lost during the winter, not by frost but by damp conditions, and this is especially so if the stems are cut off in the autumn, as rotting then sets in at the base of the old stem and will spread to the whole of the crown by the spring. This is rather surprising as in a wild state the crowns are often under water. *L. syphilitica* is often stated to be more hardy than *L. cardinalis*, but in damp conditions it appears to rot off in this area during the winter more than *L. cardinalis*, possibly owing to the fact that it forms by the autumn a large rosette of leaves, lying very flat on the damp soil.

It appears best, therefore, if the plants are to be left in the open during the winter, to leave the tops on, and in the position they were planted early in the year, and if for some reason they are to be moved delay doing so until the end of April or early May when growth has really started. Where a bed or border is entirely devoted to lobelia, it is better not to keep the ground hoed, as this damages the surface roots, but instead mulch the surface with peat or rotted leaves.

L. cardinalis, a most vivid and striking plant in its best forms, is not the easiest colour to place in the garden, and for those interested in colour schemes in their borders many of the more delicate shades produced in the hybrids would be most useful. Moreover, all last very well indeed in water as cut flowers.

Derby. H. C. PUGSLEY

The Squirting Cucumber Ecballium elaterium

A most informative article by Brighton's head gardener, published in the R.H.S. JOURNAL last year, must have put new heart into many who like myself live less than fifty yards from a Sussex cliff edge, which only too well justifies KIPLING's lines,

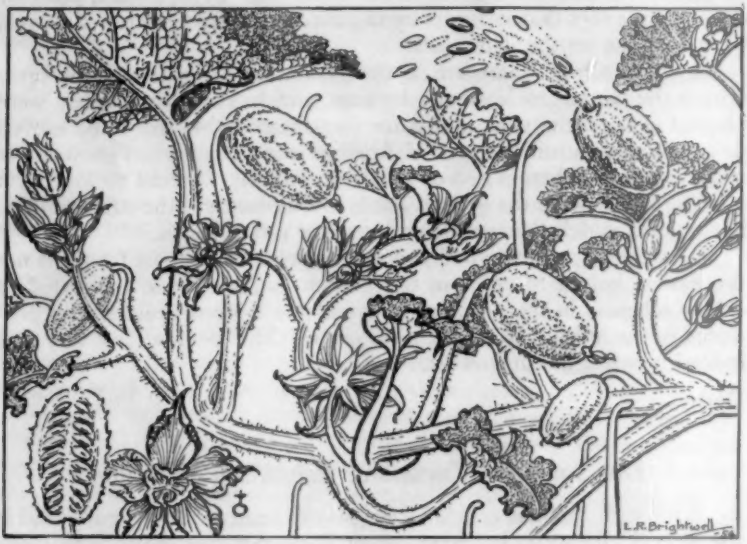
"Here leaps ashore the full sou'west
All heavy winged with brine."

So heavily winged indeed that a few hours may blacken midsummer glory, and next day see its uprooted remnants borne far inland. But one plant, collected on a sandy slope of Elba defies the worst our weather can do, and will provide masses of rich green, set off with starry golden blooms when even thrift and "close bit thyme" look pinched and shrivelled.

I first met the "squirting cucumber" in World War I. It was fringing the water-side of Marseilles, and bad little boys used its strange fruits as pea shooters, wherewith to startle the unwary. At Elba, in July 1951, it attracted my attention by the hurried retreat of a dog, nosing for oddments amidst its rampant growth, the animal seeming in some trouble with its eyes and sneezing repeatedly. Tempted to collect some seed, I planted it a few weeks later in a rockery directly facing the sea, and within a fortnight the seed had germinated. Today this plant has fairly taken charge of the seaward aspect of the rockery, is well

established on the cliff edge, and is continually being reported from neighbours, some of them a mile distant.

Some books state the plant to be annual, others biennial, but recent enquiry at Kew established *Ecballium* as a perennial, if the air be sufficiently dry, and the climate equable. Seed planted in June 1953 sprouted within a week, fruited the same year, and stubbly remnants



of the plants survived the devastating and phenomenal frosts of January 1954, which worked sad havoc with most cliff edge vegetation, only the grasses, sea plantain, and wild stock quickly getting into their stride when at last the weather broke.

Ecballium is of luxuriant sprawling habit, with leaves and blooms of typical Cucurbitaceous form, but produces no tendrils. Nevertheless it "gets there," so that all plants which it may overtake, must grow fast and rankly in order to rear their heads above its luxuriance for a meed of light and air. The fruits suggest small, olive-shaped, and extremely hirsute gherkins, pendent, and carried on stiffly upright stalks some 6 inches high. When ripe they turn yellowish where they join the stalk, and then without warning leap from it, at the same time emitting a loud "throat clearing" noise, heralding the discharge of a stream of thick, viscid juice containing some thirty hard black seeds, of the usual cucumber pattern. To gather the seed I place a tin can near the stalk end, touch the fruit lightly with a cane, and a loud "ping" on the tin floor at once announces the plant has been successfully milked. The juice, which dries into a sort of gluey "water glass" provides a purgative of most explosive quality, and care should be taken to avoid it reaching

the eyes, where it can be most irritating. Nevertheless, we can commend this plant as a curiosity. It is already in some demand by school teachers wishing to demonstrate an unusual method of seed distribution. One thing is certain—*Ecballium* looks like becoming an established feature of the Sussex coastal flora.

L. R. BRIGHTWELL
Member of the Marine Biological Association, U.K.

Halesia monticola

The fine tree shown (Figs. 57, 59) is planted in an orchard of rough grass. The aspect is south to south-east with some shelter and broken shade from the north-east and south-west. The soil is gravelly loam. The tree was planted in the autumn of 1940 and has flowered every year with the same profusion.

It is a native of North America from North Carolina to Tennessee and is known there as the "Silver Bell" Tree.

THE HON. LADY HENN-COLLINS
Briff Farm,
Bucklebury Common,
Berkshire.

WISLEY TRIALS, 1954

BORDER CARNATION

One hundred and fourteen varieties of Border Carnation were grown at Wisley during 1954. Five plants of each variety were planted on November 10, 1953. The Joint Border Carnation and Picotee Committee of The Royal Horticultural Society and the British National Carnation Society inspected the trial on July 23, 1954 and on its recommendation the following awards have been made jointly by The Royal Horticultural Society and the British National Carnation Society.

The number in brackets after the description of the variety was that under which it was grown in the trial.

ROYAL MAIL. (Raised by Mr. F. W. Goodfellow, introduced and sent by Messrs. F. W. Goodfellow (Nurseries) Ltd., Valley Nurseries, Aldridge, Staffs.) **A.M.** July 23, 1954. Plant vigorous with stout stems 28 inches long. Flower 2¾ inches diameter, freely produced, centre open, flattish; petals broad, entire, Orient Red (H.C.C. 819/1) overlaid Signal Red (H.C.C. 719). (**H.C.** 1950.) [40]

SUNSTAR. (Raised by Mr. F. W. Goodfellow, introduced and sent by Messrs. F. W. Goodfellow (Nurseries) Ltd.) **A.M.** July 23, 1954.—Described R.H.S. JOURNAL **78**, p. 30. (**C.** 1952, **H.C.** 1953.) [84]

ALDRIDGE YELLOW. (Raised by Miss R. Goodfellow, introduced and sent by Messrs. F. W. Goodfellow (Nurseries) Ltd.) **H.C.** July 23, 1954.—Described R.H.S. JOURNAL **78**, p. 464. (**C.** 1953.) [29]

COTTAGE PRIMROSE. (Raised, introduced and sent by Messrs. Allwood Bros. Ltd., Wivelsfield Nurseries, Hayward's Heath, Sussex.) **C.**

July 23, 1954. Plant vigorous with stout stems 24 inches long. Flower 2½ inches diameter, freely produced, centre full; petals broad, entire, Primrose Yellow (H.C.C. between 601/3 and 601/2). [2]

COUNTRY LASS. (Raised by Miss R. Goodfellow, introduced and sent by Messrs. F. W. Goodfellow (Nurseries) Ltd.) **C.** July 23, 1954. Plant vigorous with stout stems 28 inches long. Flower 2¾ inches diameter, freely produced, centre full; petals broad, entire, clear white ground finely striped at edges with Phlox Pink (H.C.C. between 625/1 and 625). [69]

DESERT SONG. (Sent by Messrs. Allwood Bros. Ltd.) **C.** July 23, 1954. Plant vigorous with fairly stout stems 20 inches long. Flower 2¾ inches diameter, freely produced, centre full; petals broad, entire, margin serrated, ground colour near Shrimp Red (H.C.C. 616) edged and flaked lavender grey. [103]

DOWNS CLOVE. (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **C.** July 23, 1954.—Plant vigorous with stout stems 30 inches long. Flowers 2¾ inches diameter, very freely produced, centre full; petals broad, entire, deep glowing red near Rose Red (H.C.C. 724) colour deepens towards the edges of the petals. [52]

SHEILA O'BRIEN. (Raised by Mr. F. W. Goodfellow, introduced and sent by Messrs. F. W. Goodfellow (Nurseries) Ltd.) **C.** July 23, 1954.—Plant vigorous with stout stems 24 inches long. Flowers 3 inches diameter, freely produced, centre full; petals broad, entire, margins finely serrated, ground colour near Shrimp Red (H.C.C. 616) heavily splashed with lavender grey and an occasional splash of Crimson (H.C.C. 22). [104]

DIANTHUS

The trial of Dianthus was inspected on June 22, July 2 and 23, September 10, 1954, by the Joint Dianthus Committee of The Royal Horticultural Society, the British National Carnation Society and the Alpine Garden Society and on its recommendation the following awards have been made jointly by The Royal Horticultural Society, the British National Carnation Society and the Alpine Garden Society.

The number in brackets after the description of the variety was that under which it was grown in the trial.

ALLWOODII 'DORIS.' (Raised, introduced and sent by Messrs. Allwood Bros. Ltd., Wivelsfield Nurseries, Hayward's Heath, Sussex.) **A.M.** July 2, 1954.—Plant vigorous, bushy, fairly erect habit; flower stems 16 inches long; flowers 2¼ inches diameter, double, centre tufted; petals broad, fringed, a clear shade of Porcelain Rose (H.C.C. between 620/3 and 620/2) zoned Geranium Lake (H.C.C. 20/1). [55]

ALLWOODII 'MERCURY.' (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **A.M.** July 2, 1954.—Described R.H.S. JOURNAL **77**, p. 419. (**H.C.** 1952.) [34]

ALLWOODII 'PINKIE.' (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **A.M.** June 22, 1954.—Plant very dwarf, compact habit; flower stems 4 inches long; flowers 1½ inch diameter, single, flat, open; petals broad, serrated, Roseine Purple (H.C.C. 629/2). [36]

ALLWOODII 'HAROLD II.' (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **A.M.** July 2, 1954.—Described R.H.S. JOURNAL **76**, p. 415. (**H.C.** 1951.) [40]

ALLWOODII 'JULIA.' (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **A.M.** June 22, 1954.—Described R.H.S. JOURNAL **78,** p. 465. (**H.C.** 1953.) [74]

ALLWOODII 'ROBINA.' (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **A.M.** June 22, 1954. Plant vigorous, bushy, erect habit; flower stems 12 inches long. Flowers 2 inches diameter, double, centre full; petals broad serrated, outer petals near Geranium Lake (H.C.C. 20/1) slightly overlaid Geranium Lake (H.C.C. 20), inner petals Geranium Lake (H.C.C. 20/1) overlaid Geranium Lake (H.C.C. 20). [60]

ISOLDE. (Raised by Mr. G. Taylor and sent by Messrs. Maurice Prichard & Sons Ltd., Riverslea Nurseries, Christchurch, Hants.) **A.M.** July 2, 1954. Plant vigorous, bushy, very compact habit; flower stems 7 inches long. Flowers $1\frac{3}{4}$ inch diameter, semi-double, flat, open; petals broad, serrated, white flushed very pale pink, laced Fuchsia Purple (H.C.C. 28) and zoned Ruby Red (H.C.C. 827). (**H.C.** 1950.) [14]

SHOW EXCELLENCE. (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **A.M.** June 22, 1954.—Described R.H.S. JOURNAL **78,** p. 465. (**H.C.** 1953.) [104]

ALLWOODII ALPINUS 'GOBLIN.' (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **H.C.** June 22, 1954. Plant vigorous, bushy, dwarf compact habit; flower stems 5 inches long. Flower 1 inch diameter, single, flat, open, petals broad, serrated, Rhodamine Pink (H.C.C. between 527/1 and 527) zoned Purple Madder (H.C.C. 1028). [35]

ICEBERG. (Sent by Messrs. Lindabruce Nurseries Ltd., Freshbrook Road, Lancing, Sussex.) **H.C.** July 23, 1954. Plant vigorous, spreading, bushy habit; flower stems 20 inches long. Flowers $2\frac{3}{16}$ inches diameter, double, centre full; petals broad, serrated, white. [106]

SHOW ACHIEVEMENT. (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **H.C.** June 22, 1954. Plant vigorous, bushy, compact habit; flower stems 15 inches long. Flowers $2\frac{1}{2}$ inches diameter, semi-double, centre fairly flat and open; petals broad, serrated, French Rose (H.C.C. 520) with a flush of Dawn Pink (H.C.C. 523) and with a small dot of amber at the base of the petals. [91]

ALLWOODII 'LACED HERO IMPROVED.' (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **C.** June 22, 1954. Plant vigorous, bushy, erect habit; flower stems 16 inches long. Flowers $1\frac{3}{4}$ inch diameter, double, centre full; petals broad, slightly serrated, white, zoned black and laced Ruby Red (H.C.C. 827). [45]

ALLWOODII 'PRISCILLA.' (Raised, introduced and sent by Messrs. Allwood Bros. Ltd.) **C.** June 22, 1954. Plant vigorous, bushy, spreading habit; flower stems 14 inches long. Flowers $1\frac{3}{4}$ inch diameter, double, centre full; petals broad, slightly serrated, pure white, zoned a red deeper than Ruby Red (H.C.C. 827) and laced Ruby Red (H.C.C. 827). [43]

CHARLOTTE PIPER. (Raised, introduced and sent by F. Piper Esq., 32, Shaw Avenue, Barking, Essex.) **C.** June 22, 1954. Plant vigorous, bushy, erect habit; flower stems 15 inches long. Flowers 2 inches diameter, double, centre full; petals broad, deeply serrated, white, eye, zones and stripes of Garnet Lake (H.C.C. 828). [13]

INCHMERY WHITE. (Raised, introduced and sent by T. T. Burnett, Esq., 18, Penn's Rd., Petersfield, Hants.) **C.** July 2, 1954. Plant vigorous, bushy, erect habit; flower stems 11 inches long. Flowers 2 inches diameter, semi-double, flat, open; petals broad, slightly fringed, pure white. [2]

ANNUAL CHRYSANTHEMUM

Twenty-four stocks of Annual Chrysanthemum were received at Wisley for trial during 1954. The trial was sown in the open ground on April 6; the seed was sown thinly in shallow drills 15 inches apart. A little thinning was necessary and all the stocks needed support with hazel twigs and the taller-growing ones also required stout stakes in the late summer as they grew rather tall due to the wet season.

A sub-committee of the Floral Committee A inspected the trial on July 19 and 26 and August 4, 1954 and on its recommendation The Council of The Royal Horticultural Society has made the following awards.

The number in brackets after the description of the variety was that under which it was grown in the trial.

Varieties of Chrysanthemum carinatum

DOUBLE FRINGED IMPROVED. (Raised, introduced and sent by Messrs. Watkins & Simpson Ltd., 26–29 Drury Lane, Covent Garden, London, W.C. 2.) **A.M.** August 4, 1954. Plant 3 feet high, vigorous, erect, compact, much branched, very free flowering. Flowers 3 inches diameter, single, semi-double and double, colours include white, cream, yellow, buff, deep crimson, mauve, magenta, with some of the light-coloured flowers edged with a contrasting darker colour. [12]

CHAMAELEON. (Raised, introduced and sent by Messrs. J. E. Ohlsens Enke, Linnesgade 14, Copenhagen, Denmark.) **H.C.** August 4, 1954. Plant 2½ feet high, vigorous, bushy, compact, much branched, free flowering. Flowers 3½ inches diameter, single, colours include white, cream, yellow, bronze, bronzy-purple, crimson, mauve with zones of contrasting colours. [8]

Varieties of C. coronarium

GOLDEN GLORY. (Sent by Messrs. Watkins & Simpson Ltd.) **A.M.** July 19, 1954. Plant 3½ feet high, vigorous, erect, bushy, compact, much branched, very free flowering. Flowers 3¾ inches diameter, single, petals very broad, a rich golden yellow near Lemon Yellow (H.C.C. between 4/1 and 4). [21]

TOM THUMB GOLDEN GEM. (Raised, introduced and sent by Messrs. Watkins & Simpson Ltd.) **A.M.** August 4, 1954. Plant 3 feet high, vigorous, erect, bushy, compact, much branched, very free flowering. Flowers 1⅜ inch diameter, double, a rich shade of yellow near Lemon Yellow (H.C.C. 4). [13]

ORION. (Raised, introduced and sent by Messrs. J. E. Ohlsens Enke.) **H.C.** August 4, 1954. Plant 5 feet high, vigorous, erect, compact, much branched, free flowering. Flowers 3 inches diameter, single, a rich yellow near Aureolin (H.C.C. 3). [20]

TOM THUMB PRIMROSE GEM. (Raised, introduced and sent by Messrs. Watkins & Simpson Ltd.) **H.C.** August 4, 1954. Plant 3 feet high, vigorous, erect, bushy, compact, much branched, free flowering. Flowers 2 inches diameter, double, a very pale clear yellow near Chartreuse Green (H.C.C. 663/3). [14]

Variety of C. carinatum × C. coronarium

MARGARETA. (Raised by Weibullsholms Växtförädlingsanstalt, introduced and sent by Messrs. W. Weibull A.B., Landskrona, Sweden.)

H.C. August 4, 1954. Plant 5 feet high, vigorous, erect, bushy, compact, free flowering. Flowers 3½ inches diameter, single, ray florets creamy white deepening at base to Aureolin (H.C.C. 3), disc florets deep golden yellow. [18]

Varieties of C. segetum

EASTERN STAR IMPROVED. (Messrs. Watkins & Simpson Ltd.) **H.C.** July 19, 1954. Plant 3 feet high, erect, bushy, compact, much branched, very free flowering. Flowers 3¼ inches diameter, single, ray florets cream deepening at base to Aureolin (H.C.C. 3), disc florets dark brown. [2]

ELDORADO. (Sent by Messrs. Dobbie & Co. Ltd., The Scottish Seed Establishment, Edinburgh, 7.) **H.C.** July 26, 1954. Plant 2¾ feet high, erect, bushy, compact, much branched, very free flowering. Flowers 3 inches diameter, single, ray florets a very clear bright yellow near Aureolin (H.C.C. 3), disc florets rich dark brown. [3]

PLANTS TO WHICH AWARDS HAVE BEEN MADE IN 1953, 1954 AND 1955

ORCHIDS

Cattleya (Bow Bells G.) 'Sydney' A.M. September 8, 1953. The 'Bow Bells' cross (*C.* 'Edithiae' with *C.* 'Suzanne Hye') has produced several fine Award of Merit plants. The specimen exhibited had three large flowers of a general flattish appearance mainly due to two large lateral petals. The flowers of this variety are 7½ inches long by 6 inches broad. The sepals and petals are clear satin white, while the lip has an orange-yellow throat and a frilled margin. Exhibited by S. Tharp, Esq., 10 Farm Lane, Purley, Surrey.

Cypripedium (Gorse G.) 'Goliath' A.M. February 8, 1955. This plant is another cultivar from the cross *C.* 'Ann Harper' and *C.* 'Lady Mona' to receive an award. The specimen exhibited bore a very large flower 6 inches across by 5 inches deep. The basic colour approximates to Citron Yellow (H.C.C. 601/1). The large dorsal tepal is in addition slightly suffused with green and has a broad white margin. The glossy labellum appears to be almost at right angles to the tepals. Exhibited by Messrs. R. & E. Ratcliffe, Downlands Nurseries, Chilton, Didcot.

Cypripedium (Distaff G.) 'Joyful' A.M. November 16, 1954. The well-formed graceful flower was borne on a sturdy stem. The flower was 5 inches in diameter with ruffled petals of soft greenish-yellow veined with clear light green. The dorsal sepal which measured 3½ inches across was white flushed green at the base with rays of green blending into the white above. The labellum was a glistening greenish-yellow with slightly darker green shading. Raised from the cross *C.* 'Selina' and *C.* 'Diana Broughton.' Exhibited by Major The Hon. Henry Broughton, Blakeham House, Englefield Green, Surrey.

Cypripedium 'Lemon Hart' A.M. January 4, 1955. The plant bore a single flower, 4¾ inches in diameter. The dorsal sepal, 3⅛ inches across, was glistening white with a patch of cool yellow-green covering the bottom half and extending in short rays into the white background. The slightly undulate petals were a clear yellow-green shading towards yellow in the upper half and nearly matching the yellow labellum. Raised from the cross *C.* 'Desire' and *C.* 'Ann Harper.' Raised and exhibited by Messrs. R. & E. Ratcliffe, Downlands Nurseries, Chilton, Didcot, Berks.

Cypripedium (Stanley G.) 'Loch Mist' A.M. January 25, 1955. This plant was obtained by crossing *C.* 'Moloch' with *C.* 'Mist o' the Moon.' The plant exhibited bore a large flower 5½ inches by 4½ inches. The large dorsal sepal has a broad white margin while the centre is composed of dark brown superimposed upon light green. The lateral petals are dark brown upon a greenish-yellow background, and the lip is dull reddish-brown upon yellow. Exhibited by Liverpool Parks & Gardens, The Mansion House, Calderstone Park, Liverpool 17.

Cypripedium (Anna Pavlova G.) 'Whatcroft Hall' A.M. November 16, 1954. This very pleasant white cypripedium was 4½ inches across with a broad dorsal sepal 3 inches across, shaded pale greenish-ivory at the base and sparsely spotted with reddish-purple in the centre. The softly ruffled petals were tinged with ivory with a band of pale purple in the centre extending almost to the tips and above parallel broken bands of purple flecks. The dorsals were covered with short white hairs on the outside contrasting with the waxy sheen of the petals and labellum. Raised from the cross *C.* 'Gwen Dixon' and *C.* 'Sumurun.' Exhibited by Dr. William Stirling, O.B.E., Whatcroft Hall, nr. Northwich, Cheshire.

Cypripedium 'Wollaton' A.M. November 30, 1954. The vigorous stem covered with reddish-brown hairs bore a single bowl-shaped flower of fine substance, over 4¾ inches across and felted with soft short hairs. The dorsal sepal, 3¾ inches across, was creamy white, shaded green in the centre and striated with soft purplish-brown bands about two-thirds the way up. The petals were ruffled, shading from clear yellow-green on the bottom half to pale brownish-yellow on the upper with a reticulation of slightly heavier tone. The lip was similar in colouring to the upper part of the petals. The lower dorsal was light green. Raised from the cross *C.* (Hancar G.) 'George Corser' × *C.* 'Papyrus.' Exhibited by Dr. William Stirling, O.B.E., Whatcroft Hall, nr. Northwich, Cheshire.

Dendrobium (Snowdrift G.) 'Purity' A.M. September 22, 1953. This large-flowered dendrobium with individual flowers 3¼ inches by 2 inches was obtained by crossing 'Nellie Sander' with *D. formosum.* It has larger flowers than the latter and the plant exhibited had a spike of six blooms. The sepals and petals are clear white while the lip has in addition a pale orange-brown flush on the throat. Exhibited by Messrs. Stuart Low & Co., Jarvis Brook, Sussex.

Laeliocattleya (Southport G.) 'Alpha' A.M. November 16, 1954. Two flowers over 5½ inches across were borne on a single spike. The heavily ruffled petals over 3 inches across and 3½ inches long were Mallow Purple (H.C.C. 630/1) with a paler margin and slight green shading at the base. The ruffled labellum was very large, 3½ inches long and 3¼ inches wide, deep Petunia Purple (H.C.C. 32/1) shaded crimson with a golden throat heavily veined with crimson. This cross between *Lc.* 'Elissa' and *Lc.* 'Corisande' was exhibited by Messrs. The Stuart Low Co., Jarvis Brook, Sussex.

Odontioda (Saxeta G.) 'Lyoth Jewel' A.M. November 30, 1954. A single spike bore seven flowers and three buds. The flowers were 3½ inches in diameter with five beautifully formed, slightly overlapping, orange-apricot petals well frilled and margined with a broad band of rose-purple. The lip combined the same colours save for a bright yellow crest with orange-brown markings. As the flowers matured they tended to become slightly paler in colour with edges of the petals turning to a soft magenta. This hybrid, raised from the cross *O.* 'Saxa' and *O.* 'Zeta,' was exhibited by Messrs. Charlesworth & Co. Ltd., Lewes Road, Haywards Heath, Sussex.

Odontioda (Favour G.) 'Symphony' A.M. November 16, 1954. The plant bore a spike with eight flowers which were heavily ruffled and frilled. The colouring was a combination of apricot and orange with a purplish sheen. The frilled and fimbriated lip was a deep orange-red with a margin of soft yellow and a bright gold crest lined with crimson. It was raised by crossing *O.* 'Vivien' and *Odontoglossum* 'Faygate.' Exhibited by Messrs. The Stuart Low Co., Jarvis Brook, Sussex.

Odontoglossum (Purbeck G.) 'Dorset' A.M. January 25, 1955. The result of crossing *O.* 'Brockhurst Beauty' and *O.* 'Rosemary' was this handsome large-flowered Odontoglossum, individual flowers being 4 inches by 3½ inches. The basic colour of the sepals and petals is a deep reddish-purple, which fades to a pale mauve margin with small white areas. The lip, surmounted by a yellow crest, is a rather darker purple lake shade, and has a white band at the apex. A spike containing six flowers was exhibited by Messrs. Dorset Orchids Ltd., Plush, Dorset.

Oncidioda (Jarvis Brook G.) 'Vulcan' A.M. November 30, 1954. On a long twisting stem almost like a climber were fourteen beautiful flowers of unusual colour. The petals and sepals had narrow tapering claws at the base so that around the lip were open areas giving the flowers a light and airy look. The sepals were a deep satiny brown with no red tone; the two slightly paler petals were tipped with a band of cream heavily flecked with minute spots of dark brown. The lip, broadly triangular with rounded apices, was the same very dark brown with a yellow crest. Raised by crossing *O.* 'Stuart Low' and *Oncidium macbeanianum* and exhibited by Messrs. The Stuart Low Co., Jarvis Brook, Sussex.

BOOK NOTES

"The Pruning of Fruit Trees." By Paul Champagnat, translated and edited by N. N. Bagenal. Demy 8vo. 166 pp. Illus. (Crosby Lockwood.) 12*s*. 6*d*.

Mr. P. Morton Shand reviewed the French edition of this work in the JOURNAL for October 1950 and drew attention to its importance to fruit growers. This English edition, edited and translated by Mr. Bagenal, should therefore be welcome. After a short chapter on pruning in general, the book deals with the various systems of pruning which have been tried from time to time and as Mr. Bagenal says in his translator's note, "Practical fruit growers all the world over are looking for a pruning method that is simpler to practice and to teach and more economical of labour than any that exists at the present time. Paul Champagnat's book contains many stimulating ideas on this subject." It is well illustrated with very clear diagrams.

"Die Orchideen." By H. Thomale. (1954.) 190 pp. Illus. (Published Eugen Ulmer Verlag.) Price 30*s*.

Hans Thomale is one of the younger generation of orchid growers whose powers of absorption of modern techniques has in no way impaired his Germanic thoroughness in applying this knowledge to practical culture.

It was in England I got to know him, when, after a brief acquaintanceship abroad, he helped our firm, with the permission of the Board of Trade, over certain technical difficulties arising from asymbiotic culture of paphiopedilums (cyps.). His prowess in the laboratory, his qualities and knowledge as an orchid grower seem to me well ahead of his years, for Hans Thomale is a young man. For this reason, I find the lack of really expert and *different* information on symbiotic culture, rather disappointing. His book, *Die Orchideen*, falls in with the usual pattern of contemporary works on orchid culture, as indeed one would expect it to, but it seems to me a luxury at nearly £2 sterling. The excellent illustrations, however (114 in all), should be taken into consideration, of which, strangely enough, no less than 56 are the work of George Fuller, late of Sanders and Kew Gardens, where he accumulated a wonderful set of photographs of species of orchids. Some are really delightful, and in particular plate 91, *Cypripedium godfroyae*; plate 102, *Sobralia macranthe* var. *kienastiana*; plate 47, *Brassavola perrinii* with three dozen flowers; and plate 45, *Anguloa brevilabris*, another rare and lovely species. Fuller himself, although not named, appears in one excellent plate on p. 48.

The most outstanding chapter is, I think, the all too short page on indoor culture of orchids—"Zimmerkulture"—which, alas, fails to mention any of the many orchids suitable. An excellent book, and yet one feels the next edition should be much more complete, and worthy of translation into English.

DAVID S. SANDER

"Surrey Gardens." By Eric Parker. 260 + xii pp. Illus. with drawings. (B. T. Batsford Ltd.) 18*s*.

Mr. Eric Parker resolved to give some account of the Surrey gardens opened to the public. He has now written this book which, though entitled *Surrey Gardens*, is in fact a somewhat loosely strung together collection of information and comment on the gardens, his own included, birds, butterflies, animals, dialect and landscape of the county in which he has lived for fifty years.

There are also chapters on various writers in some way associated with the county, among them Dean Hole and Reginald Farrer, though their connection is not explained. The latter part of the book is made up of some rather generalized descriptions of many Surrey gardens opened to the public. It is important in the context that it should be pointed out that Farrer's *English Rock Garden* was published in 1919 and not in 1913 as stated on p. 111. Also I question whether Miss Jekyll's account of her cultivation of *Cardiocrinum giganteum* (p. 23) at Munstead was written in 1878. It seems more likely to have been twenty years later. There are some inaccuracies in botanical names. *Rhododendron metalloides* (p. 173) is surely *R. myrtilloides*, and *Notofagus* (*sic*) *bellidioides* (p. 239), *Nothofagus betuloides*.

MORTON

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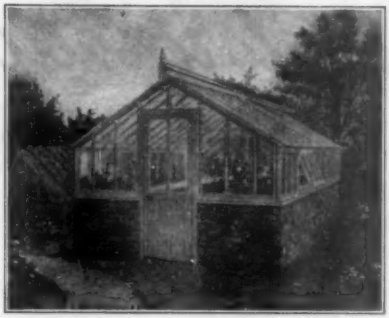

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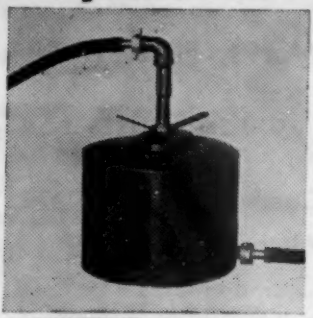

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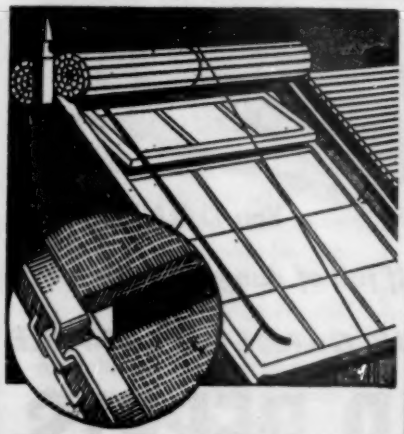

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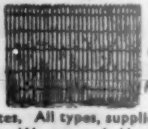

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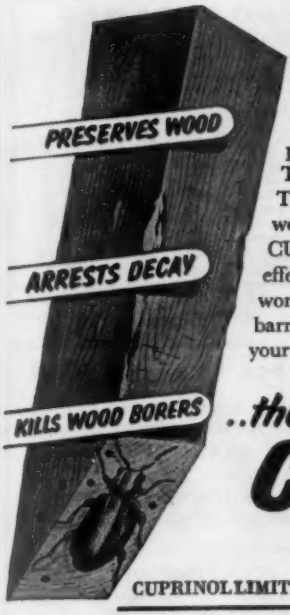

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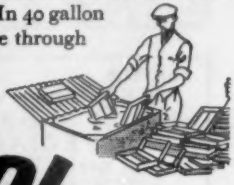

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